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NESTING HABITS OF LECONTE'S SPARROW.

BY P. B. PEABODY.

Plate III.

THIS weird, mouse-like creature I met in the Red River Valley of Kittson County, Minnesota, on May 27, 1896. Two specimens were taken in a timothy field redeemed from marshy meadow, and swarming at the time with Red-winged Blackbirds, Soras, Western Savanna Sparrows, Wilson's Phalaropes, and Bobolinks, along with the water fowl and other larger birds. I had previously met Leconte's Sparrow, several times, on the prairies of Eastern Kansas. It proved to be abundant during 1896 in the Red River Valley, the season being a wet one. It was especially common along the stretches of willow-dotted meadow prairie, this sort of habitat proving to be its favorite one. Not, however, until the summer of 1897 did I become really familiar with the ways of this most elusive bird. This proved to be the season of its apparent greatest abundance, of late, and most of my time afield was spent in the study of Leconte's Sparrow.

Subsequent seasons have shown that constant and very critical attention must be paid to the habits of this bird if one would become familiar with its summer life. One might, for example, search its familiar haunts day after day during the daytime, at the beginning of the period of its arrival in the North, without detecting the

slightest evidence of its presence. One must learn just what sort of 'cover' is favored by the bird or he will fail to flush it even with minutest search, as the bird, save during the early and the late hours of the day, even in the height of its courtship, is conspicuously silent. I may state, in illustration of this fact, that I have searched a whole day, on favorable ground, without meeting the bird; while at dusk after starting home, I counted fifteen distinct recurrences of its note along the wayside in going two miles through the meadows.

The date of its springtime arrival, as noted for the past four years, will show how elusive this sparrow is, these dates being April 28, May 12, April 25, and June 2. Probably about the 20th of April, in average seasons, will find *A. lecontei* at the International Boundary Line. By the 12th of May it has grown common, if it is to become common; and it practically leaves northern Minnesota by the 10th of October, though a few stragglers may be found somewhat later.

Most of its time is spent in the dense dead grass, though it feeds, in the morning and at sunset, where the living grass is scanty. At rare intervals during the day, in breeding time, the male may be seen peering above the grass-tops, as he clings to some slender willow stem, trilling his thin, wiry, yet intensely penetrating and not unmusical *r-r-r'-sz-z-z-t;* with which laconic, cicada-like note he also greets the rising sun and the closing day. I have detected but two other notes: the sharp and exceedingly shrill *tsip* which is ceaselessly iterated, at short intervals when an intruder is near the nest, and the love-note which the male bird trills as he balances himself on tremulous wings a dozen feet or so above the ground, impetuously reeling out a dry, creaky *eélree-eélree-eélree-eélree.* This note must be rarely indulged in, as I recall having heard it but twice.

Leconte's Sparrow nests where dead grass is thickest. All along the Red River are still wide stretches of prairie, the lowland sections of which abound in lower spots with luxuriant growths of heavier grass and vetch. It is in such places that Leconte's Sparrow breeds. This bird is exceedingly local. Every such bit of meadow as I have described will have its pair of birds; and an expert can repeatedly flush the male, and at times the female,

from this patch at almost any time of day. Few observers can be aware of how persistent is this sparrow in its well-known skulking habit. Repeatedly when driving through these meadow spots, in search for nests, I have caught a glimpse of a Leconte fairly under my buggy wheels; and on dismounting and making a careful search with my hands, have caught perhaps a second sight of the fearless bird only four or five feet away without flushing it. I have never found any indication that this incessant skulking has any exclusive connection with the nesting season. It is this habit which makes the bird so difficult to secure. If one should discover a Leconte's Sparrow perching, as above described, and see him instantly dive into the grass, one must run with all speed to the spot if he wishes to see the bird again. Its flight when flushed is, in the main, short, fitful, and undulating, having characteristics of its own, yet somewhat resembling the flight of the Short-billed Marsh Wren, of whose society Leconte's Sparrow seems to be fairly fond.

There seems a wide range as to the date when nest-building begins, as will appear from the following list of nests found.

1. June 5, three eggs, one of Cow-bird; incubation advanced.
2. May 30, five eggs; incubation none.
3. May 31, four eggs; incubation begun.
4. May 31, five eggs; incubation none.
5. June 3, three eggs, and one of Cowbird; incubation, trace.
6. June 3, five eggs; incubation, trace.
7. May 29–June 5, five eggs; incubation four days.
8. June 5, one egg, one of Cowbird; soon deserted.
9. June 5, five eggs; incubation nearly completed.
10. June 9, four young, just hatched; one egg hatching.
11. July 6, two dead eggs, one half-grown Cowbird.
12. June 5, nest recently deserted; shells of fresh eggs.
13. June 5, one egg, fresh; nest deserted.
14. June 5, a nest of the previous year, found while investigating a pair of birds that surely had a nest within a few feet. Female apparently sitting.

I should add, regarding nest 5, that the nest was left for photographing on June 23, and that when the nest was taken, July 9, it contained a Cowbird's egg. This, and a previous finding connected with a Towhee's nest, containing three eggs by the

same Cowbird, a fourth being subsequently added after all the eggs had been removed, reflects upon the intelligence of that arrant parasite, which is nowhere more numerous than in the Red River Valley. Three nests of the above, it will be noted, contained eggs of the Cowbird. From this it is fairly clear that the Cowbird must, in many cases at least, find nests for the deposition of her own eggs by persistent searching, backed by a highly developed instinct.

As regards both the nest and the eggs, there are marked points of difference between Leconte's Sparrow and any of its congeners. The normal nest is unique among the nests of Minnesota-breeding sparrows. It would seem to be built, in the main, as follows: where dead and fallen grass is thickest, the bird interweaves dead grasses among the standing stems, thus forming a rude nest. Within this is placed the nest proper; this is an exquisitely neat, well-rounded and deeply-cupped structure, composed uniformly of the very finest grasses. In all but two of the nests noted above, there was a more or less thick covering of fallen dead grass; all the nests except these two were in the lowland. The average nest is placed with the base about eight inches above the ground. One of the lowland nests noted barely touched the ground, however, while the two upland nests were half sunk into the earth, being thus, in situation and surroundings, somewhat like nests of the Western Savanna Sparrow, though somewhat smaller and relatively deeper.

The eggs are usually distinct from those of any other of our northern sparrows. While abnormal eggs are shaped and colored like certain blue-grounded and umber-clouded eggs of the Song Sparrow, the normal eggs of *A. lecontei* are much more rounded than any eggs allied to them, having, in the main, a ground color strikingly resembling that of a certain type of the eggs of the Yellow-headed Blackbird, being of a mottled bluish-gray tint with few distinct spots. They have, also, the same tendency to dark streaks and hair-lines about the apex that characterize the eggs of that species. There is a marked uniformity in the dimensions of eggs of the same set. In one set the dimensions are .73 × .53; in another, .69 × .53. Others are, .77 × .54, and .68 × .55. One set shows marked differences in size, namely .65–.71 × .52–.57.

The average of 27 specimens is .715 × .542. My tables show a marked uniformity in the shorter, and an equally marked divergence in the longer, diameters.

In coloration, the eggs of the same set show a marked uniformity. This is the more striking since the range of coloration is very great. Set 1 is most beautiful, its three eggs being so overclouded with a marbling of rich dark brown that the ground color is quite obscured; while set 2, taken the following year, has the ground-color of a clear, pale blue, with exquisite gray-brown stipplings and hair-lines about a very narrow area at the apex.

In brief, normal nests of Leconte's Sparrow are located in dense fallen grass, well concealed, with the bottom about eight inches above the ground; the deep-cupped and remarkably neat nest will generally have a few of the standing stems interwoven with the outer nest material; the eggs are well rounded, as a rule with clear markings, tending to cluster at the apex. Add to these facts the further one that, to one who is familiar with this bird in the hand, there should be no great difficulty in recognizing *A. lecontei* instantly as it is flushed, identification being not so difficult as we have been led to suppose.

To the fourteen nests here catalogued should be added, probably, a fifteenth. It was located, like the other upland nests noted, near the margin between the meadow and the upland. It was but scantily hidden, and its (small) eggs were, in shape and color, like blue-tinted eggs of the Song Sparrow. The parent was exceptionally wild. Failing to establish identity clearly by flushing, I set a trap which was sprung by the bird. My final attempt to shoot the parent resulted in her flushing at long range and escaping my shot, only to desert the nest. This nest, however, in structure and in size, is undoubtedly referable to this species, as the bird was too small for a Savanna Sparrow. This would give only one fifth of the nests found as upland nests; that sort of location proving thus to be exceptional.

The conditions of the finding of nest 1 were so novel, yet so characteristic, that one may be pardoned for adding the story here. While crossing, in my buggy, an area of about an acre of prairie that was densely carpeted with heavy grass, laid smoothly down by the snow of the previous winter, my sight was arrested by a

sparrow, flying heavily, with a sort of hovering manner, two hundred feet away. Moving slowly and deviously, as if in search, it soon alighted and ran tortuously on foot for a hundred feet and suddenly disappeared into the dead grass. Driving as close as I dared, to flush the bird, I suddenly caught sight of her sitting on the grass, just back of my rear buggy wheel, and only five feet from me. Thus she sat for fully five seconds. A mat of grass at least two inches thick lay over the nest. There was no visible opening. The wheel had passed within two inches of the eggs.

For the benefit of those who have never seen the young of this sparrow, just from the nest, it may be added, that they have a ground color appreciably paler than that of the parents and of an olive-yellow tinge; while the young-of-the-year, in October, are still paler with a most exquisite hoary bloom over the entire plumage. This bloom fades within a few hours after death.

As regards distribution and relative abundance, a few words may be added. Wherever I have traversed in the region of the Red River Valley, previous to the present season, any haunts favorable to Leconte's Sparrow, I have always found it more or less uniformly distributed. On the contrary, during the season of 1900, which was most exceptionally dry, no birds were seen or heard until June 2;[1] and the only birds found during the entire summer were restricted to some six pairs, all found on an area covering hardly more than a square mile. And the dry weather had, apparently, affected not only the abundance of the bird, but its breeding conditions. Having come to regard this sparrow as an exclusively meadow-and-prairie bird, I was astonished, in October of 1900, to find it in a meadow, among the spruce swamps at Hibbing, a hundred miles northwest of Duluth. Two birds were flushed three times, and perhaps three birds were seen; all within a very narrow area. I am confident that these birds were only migrants. But little that is authentic and circumstantial has as yet been recorded concerning the summer life of Leconte's Sparrow. It now remains for field observers in Minnesota, the Dakotas, Manitoba and Assiniboia to define for us, accurately, the range of this bird's summer home.

[1] Baird's Sparrow, usually abundant in the Red River Valley, was this season entirely absent.

ON THE OCCURRENCE, IN MASSACHUSETTS, OF CERTAIN RARE OR INTERESTING BIRDS.

BY WILLIAM BREWSTER.

EUROPEAN WIDGEON (*Mareca penelope*). — Mr. James T. Clark, the well-known Boston taxidermist, has recently shown me a mounted specimen of this species which was shot in Monponsett Pond, near Halifax, Massachusetts, October 20, 1899, by a Mr. Shindler who keeps a small shooting shanty or house for the accommodation of sportsmen who visit the pond in pursuit of water fowl. The *M. penelope* came in to decoys in company with a small flock of American Widgeon of which several were killed at the same time and two, an adult male and female, sent to Mr. Clark for preservation with the European bird. The latter is a fine old male in remarkably handsome plumage. The creamy white of the forehead and crown is strongly tinged with chestnut; the sides of the head are rich chestnut finely spotted with green. Mr. Clark tells me that the bird was very fat and that its stomach contained a few freshwater shells and a quantity of seeds of aquatic grasses. It is, I believe, the first specimen that has ever been reported from any part of New England.

EUROPEAN TEAL (*Nettion crecca*). — On February 26, 1896, Mr. Clark brought to me in the flesh, in fresh condition, an adult male European Teal which he had received on the 24th from Rev. E. A. Phillips of Sagamore, Massachusetts. Mr. Phillips said that the bird had been caught, a few days previous to the date on which he sent it, in a steel trap and that, in company with two other Teal of similar appearance (but probably belonging to the American species), it had been seen repeatedly in the same place. This is, I believe, only the second known instance of the occurrence of the European Teal in New England, the first being that of the bird, also an adult male, taken by Mr. George H. Mackay at Muskeget, March 16, 1890 (see Auk, VII, 1890, p. 294). Both specimens are now in my collection.

AMERICAN WHITE-FRONTED GOOSE (*Anser albifrons gambeli*). — Mr. Clark has also obtained for me a male of this species in fully

mature plumage. He received it in the flesh November 26, 1897. It was taken a few days before this date at Plymouth, Massachusetts. Mr. Paul W. Gifford who shot the bird reported that it came in alone to his decoys and that it appeared to be very weak. Mr. Clark on skinning it found that it was so thin as to be almost emaciated. I saw it soon after it was mounted and Mr. Clark attempted to purchase it for me but Mr. Gifford would not then part with it. He placed it on a desk in his office in Boston where the rats got at it and ate off both its feet with most of the legs and a part of one wing. In this mutilated condition the bird has just come into my possession. Save for the injuries just mentioned it is a remarkably handsome specimen.

CLAPPER RAIL (*Rallus crepitans*).— I am still further indebted to Mr. Clark for a finely mounted specimen of the Clapper Rail which has an interesting history. It was taken November 30, 1895, at East Orleans, Massachusetts, by Mr. John Greenough Rodgers who started it on the edge of a marsh during a snow storm. It flew a short distance and plunged into a snow bank. Mr. Rodgers, seeing the hole by which it had entered, thrust in his hand and pulled it out. He sent it to a Mr. Seaver who kept it alive for a day or two. It ate at first but finally refused all food and died, when Mr. Seaver took it to Mr. Clark who found it much emaciated. It is a male, quite typical of the form *crepitans*, and in fresh and remarkably perfect autumn plumage.

AMERICAN OYSTER-CATCHER (*Hæmatopus palliatus*). — Mr. Charles A. Hardy of Auburndale, Massachusetts, has very generously contributed to my New England collection an adult male Oyster-catcher which, with a female, also said to be an adult and probably the mate of the first, he shot at Chatham, Massachusetts, August —, 1899. He writes me that "they came in beautifully to decoys and my whistle and were the only ones I have ever seen there," *i. e.*, at Chatham. Both specimens were skinned by Mr. M. Abbott Frazar; the female remains in Mr. Hardy's possession. I have an impression that a brief mention of the capture of these birds has already appeared in print, but my assistant, Mr. Walter Deane, has searched in vain for such a record.

AMERICAN BARN OWL (*Strix pratincola*). — Although Massachusetts records of this owl have multiplied of late, there is per-

haps still room for one of a bird which was taken at Worcester, Massachusetts, May 23, 1891, by a young son of Mr. Charles K. Reed, the well-known taxidermist. Mr. Reed mounted the bird and afterwards sold it to Mr. John E. Thayer in whose collection, at Lancaster, Massachusetts, it has been for some time. A few months since, Mr. Thayer, learning that I was anxious to obtain a New England example of the Barn Owl, most generously sent me this Worcester bird with his compliments. The specimen, a male, is well mounted and in fine condition in every way.

THE CERULEAN WARBLER (*DENDROICA CÆRULEA*) AS A SUMMER RESIDENT IN BALTIMORE COUNTY, MARYLAND.

BY FRANK COATES KIRKWOOD.

As a live bird the Cerulean Warbler was unknown to me until June 11, 1899. That year they were noted until August 15, and a nest supposed to be of this species was found. In 1900 it was carefully watched for and recorded from April 29 to August 19, and a nest with four eggs was collected on June 10.

Ravenshurst farm, where I have spent nearly every Sunday and occasionally other days for the last twelve years, is situated at the head of Dulany's Valley in Baltimore County and is thirteen miles N. N. E. from the centre of Baltimore City. The house stands at an elevation of 480 feet above tide-water and a sharp declivity in front of it gives an uninterrupted view of the entire length of the valley (lowest point 170 feet above tide), with Towson, seven miles from Baltimore City, on the horizon at the other end, on an elevation of about 500 feet. Near Towson, at a similar elevation, is the point, where Mr. J. Hall Pleasants on July 14, 1893, collected the adult and immature male birds recorded in 'The Auk' (Vol. X, 1893, p. 372). This remained as our only Maryland Record until the present.

My experience during the last two summers leads me to suppose that the species has a decided preference for high open

woods clear of underbrush, and if this is so it would account for the scarceness of the species. Between our orchard and the pike, extending a considerable distance, is a strip of original growth timber, about 150 feet wide, from which the underbrush has been cleared, while across the pike is a large tract of woods. On the other side of the orchard, about one eighth of a mile distant from the strip mentioned, is another piece of woods from which the hogs have cleared the underbrush. This also has considerable woods in its original state, on one side. It is in these two pieces of woods that the birds have summered. The trees are principally chestnuts, with oaks, hickorys, tulip trees, etc.

The following items are taken verbatim from my pocket note-book and were made with the aid of a strong field-glass. Had the birds been round previously I assuredly would have known it, but my first note is as follows:

June 4, 1899. In gate woods, hear a strange warbler song but fail to see bird.

June 11. In company with Mr. F. A. Saunders, who is visiting me, the strange song of the 4th is identified as that of the Cerulean. We heard it in the woods west of the pike and in response to our 'squeaking' the bird came within twenty-five feet of us, perching on a bare branch. We then kept quiet and it leisurely hunted the lower branches of the tree for about ten minutes, occasionally singing. Subsequently we heard the song of this species in three or four different parts of the woods, but whether the same individual or not we could not say.

June 18. One singing in gate woods. It seemed to prefer the bare or dead twigs of the lower branches of the trees some twenty-five to forty feet up. During the forenoon it sang incessantly with its feathers fluffed out. From 4.20 P. M. to dusk heard it off and on. Once while it was singing some short distance off I was watching another sitting silent on a dead twig with its feathers fluffed out.

During the forenoon in the gate woods a female Redstart was observed pulling material out of a nest saddled on a chestnut branch. Investigation showed a warbler's nest of some kind ready for eggs, but it was not a Redstart's, and no other bird was

seen near it though it was watched for a long time. It was placed on lowest branch but one, five feet out from tree and thirty-five feet, eight inches up from ground. It was completely gone on 25th.

June 25. See one singing in different trees in gate woods. Once it dressed its feathers, sitting on a dead twig and sing ing all the time, otherwise it was hunting slowly like a Worm-eating Warbler. It would sing for about twenty minutes and then fly off, and we could not locate it until it started to sing again. On one occasion while watching it singing, heard another about one hundred yards off.

July 2. Singing as I enter gate woods; it stopped at 10.18 A. M., flew to another tree, sang a few times and stopped. Commenced again at 11.04 and sang eight minutes, when it came down from branches to a nearly rotten stump not two feet high and hunted round it for several minutes, then flying off. Sings again from 11.31 for ten minutes (12.15 to 12.45 in house for dinner). Do not hear it again until 5.45 P. M., it then sings right along to 6.15, when I go to supper.

July 3. At 9.15 A. M. sings several times; 9.25, sings four or five times, 9.31 started and sings nineteen minutes. It then flies from top of one high chestnut to another and chased a Goldfinch out of sight. A few minutes later it was singing again and kept on incessantly, first in one tree then in another until I get a stiff neck and leave at 11 A. M.

July 4. Sang from 9.21 A. M. for eighteen minutes, and from 9.59 for seven minutes. Do not hear it again until 7.27 P. M., when it sang for twelve minutes; later it sang off and on until 7.32, when I heard last song for the day.

July 9. See one, with only slight indications of a collar on either side. Singing off and on all day in gate woods.

July 16. 9.46 A. M., sang for about twenty minutes; rather more sluggish than usual.

July 27. Singing in pig woods.

July 30. One sings eight to ten times in woods west of pike near point where it was first seen on June 11.

Aug. 10. One singing in pig woods.

Aug. 13. One singing in pig woods.

Aug. 15. One singing in gate woods.

Apr. 29, 1900. One singing on bare branch of apple tree; finally flies into pig woods.

May 6. Watch one singing in pig woods and hear another at same time; later hear one in gate woods where it is also singing in afternoon.

May 7. One singing at house this morning.

May 13. Two singing at once in pig woods. See pair, male and female, in gate woods.

May 20. Forenoon singing in pig woods; afternoon singing in gate woods.

May 27. While watching male singing as it flies after female in pig woods, hear another singing in the distance.

June 3. Forenoon singing in pig woods; about noon singing in gate woods; afternoon don't hear it at all.

June 4. One singing in pig woods.

June 10. Hear one singing in gate woods and in a minute or two see it chasing a female Redstart round top of a low oak, jerking out its song all the time. Happening to look directly overhead, see nest on lowest branch of a tulip tree, and going to one side see female on nest; 3 P. M., one singing in gate woods; a little later one singing in pig woods.

June 17. One singing in pig woods.

June 18. One singing in pig woods.

June 20. Two singing at once, nearly all day, in pig woods.

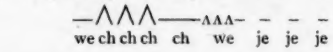
July 15. Watch one singing in pig woods and hear another at same time.

Aug. 19. See two or three and hear two or three others singing immature or imperfect (?) songs in pig woods.

I have given the above memoranda verbatim as made at the time and it will be noted that only twice was the species found in the dense woods. This does not prove that they may not have been there often enough, only that I did not observe them there, while I was almost certain to find them in either one or other of the two open pieces.

In habits this bird considerably resembles the Worm-eating Warbler, being rather slow and sedate in its movements. It will also sit for long periods motionless and silent, on a dead twig

under the branches proper of the high trees. Here it also to a considerable extent does its hunting. Its song is so distinctive that after being once recognized it can never be confused with that of any other bird. Although recognizing the impossibility of portraying bird songs, I venture on the following which, however, is



not very satisfactory. It also gives its song in a low tone as if it whispered it, and unless the bird is carefully watched the observer might be led to believe that he heard a second bird singing in the distance. I have watched a bird sing thus between each regular song, at other times it would not give it at all, or only occasionally, while on two or three occasions I heard it given for quite a while to the exclusion of the regular song, and quite often have heard it given two or three or even more times in succession between regular songs.

The nest found on June 18, 1899, could not at that time be definitely stated to be a Cerulean's, as only the Redstart that demolished it was seen at it. It was, however, an exact counterpart of the nest collected on June 10, 1900. This latter nest contained four eggs, very slightly incubated. Their ground color is a pale grayish with a slight bluish cast, marked with pale reddish specks and spots, nearly all being on the larger end. One egg, however, has also some fairly large blotches of a much lighter reddish round the girth. Underlying this on the larger ends of all are lilac spots of different shades.

The nest is made of brown bark fibre, with some fine grass stems among it, and is finished inside with a few black horsehairs. Outside it is finished with gray shreds of bark, spider web, and a few small fragments of newspaper that had been water-soaked. It measured, inside $1\frac{3}{4}$ inches across by 1 inch deep; outside $2\frac{1}{2}$ inches across. As the branch sloped, one part of the rim is within $\frac{3}{4}$ of an inch of it, while the opposite part is $1\frac{3}{4}$ inches above it, the material comes down on one side of branch to $2\frac{1}{4}$ inches below the rim. On this side a tiny twig arches out from branch and extending to the rim is imbedded in the nest, and the leaves which grew from its top shaded the nest. On the other side the material merely came down to the branch, which meas-

ured one inch in diameter at this point. Just clear of the nest on the lower side a twig one half an inch in diameter slopes away from the nest but does not support it in any way. The end of the branch was broken off, as often occurs with the tulip tree, and the nest was placed near this end, 15 feet out from the tree and 48 feet 6 inches up from ground. There was but one branch growing lower on this tree and it was on the other side, so that there was a clear space between the nest and the ground. The nest would answer in every particular for the original of the one described on page 360 of the October, 1900, number of 'The Auk,' collected in western Ontario by Mr. W. E. Saunders, whose brother was with me when I first identified this species.

TWO RACES OF THE VARIED THRUSH.

BY JOSEPH GRINNELL.

Hesperocichla nævia nævia (*Gmelin*) *Ridgway*.

Turdus nævius GMELIN, Systema Naturæ, Tom. I, 1788, p. 817.

Hesperocichla nævia RIDGWAY, Proc. U. S. Nat. Mus., Vol. III, 1880, p. 166.

Type, ♀ ad., No. 1222, coll. J. G., Sitka, Alaska, July 2, 1896; collected by J. Grinnell.

Description — Back, scapulars and rump bistre; upper tail-coverts brightening into vandyke brown; upper surface of tail dark Prout's brown; top of head and cervix dark mummy brown abruptly outlined posteriorly against the color of back. Dark parts of outer surface of closed wing seal brown; tips of greater and middle wing-coverts, and spot composed of outer webs of primaries near their base, tawny ochraceous; edging of outer webs of terminal third of primaries and secondaries hazel. Foreneck tawny, brightest laterally on malar region; lores and auriculars same as top of head, perhaps slightly grayish; feathers of auriculars with narrow ochraceous shaft-streaks; longitudinal stripe from above eye along upper margin of auriculars, and spot on lower eyelid ochraceous; complete pectoral band raw umber; remainder of under parts posterior from pectoral band tawny ochraceous; feathers of sides with crescent-shaped tips of light sepia; flanks nearly uniform light sepia with a perceptible raw umber tinge; middle of belly white with a faint buffy

tinge; feathers of lower tail-coverts basally sepia, laterally tawny and terminally buff. Tips of under wing-coverts and bar on inside of closed wing pale buff. Lower surface of wings and tail light sepia. Small wedge at tip of inner web of one outer tail-feather pale buff.

Measurements of Type.— Wing, 4.75; tail, 3.60; tarsus, 1.25; middle toe with claw, 1.17; culmen, .78; bill from nostril, .60. Primary formula, 4-3-5-2-6-7-8-9-10-1.

Range.— Northwest coast region; in summer, the Sitkan District; south in winter along the coast as far as central California (Santa Cruz Mountains).

Hesperocichla nævia meruloides (revived name), new subspecies.

Orpheus meruloides SWAINSON, Fauna Boreali-Americana, 1831, Birds, p. 187.

Type.— ♀ ad., No. 3986, coll. J. G., Kowak River, Alaska, May 22, 1899; collected by J. Grinnell.

Description.— Back and scapulars drab gray washed with sepia; rump clear mouse gray; upper tail-coverts and upper surface of tail hair brown; top of head and cervix bistre, shading posteriorly into color of back. Dark parts of outer surface of closed wing varying from clove brown to sepia; light tips of middle and greater wing-coverts and edgings of primaries buff. Foreneck ochraceous; lores and auriculars hair brown; postocular stripe and small spot on lower eyelid cream buff; complete pectoral band hair brown washed with isabella color; under parts immediately posterior to pectoral band rather pale tawny ochraceous, fading behind into the pure white of the lower abdominal region; feathers of sides tipped with hair brown crescents which condense on flanks into a patch of the same; lower tail-coverts basally olive, laterally ochraceous and terminally white. Tips of under wing-coverts and bar on inside of closed wing white. Lower surface of wings and tail dark drab gray. White wedges at ends of inner webs of three outer tail-feathers; wedge of outermost tail-feather one half inch in length; those on the other two successively smaller.

Measurements of Type.— Wing, 5.10; tail, 3.80; tarsus, 1.30; middle toe with claw, 1.22; culmen, .82; bill from nostril, .63. Primary formula, 3-4-5-2-6-7-8-9-10-1.

Range.— In summer the interior of northern Alaska (eastward to the Mackenzie River?); wintering abundantly in southern California.

As is evident on comparing the above descriptions, well-marked differences exist in the case of the female between the Varied Thrush breeding in the humid Sitkan District and that of the

dryer interior region of northern Alaska. The Sitkan race is characterized by a predominance of deep browns, restriction of white or light markings, and by a shorter and more rounded wing. The northern and interior race has a much grayer and paler coloration, greater extension of white markings, and a longer and more pointed wing. Unfortunately I have no male birds from Sitka, except juveniles; but three spring males from the Kowak Valley, when compared with late winter males from northern California taken along with females referable to *nævia*, are of a lighter slate color dorsally and slightly paler tawny beneath. The females of this species appear to be much more subject to protective coloration, so-called, than the males, and it is therefore reasonable to expect climatic variations to be more pronounced in the females than in the males, especially when the climate of the *summer* habitat is of an extreme nature. In the winter home of the Varied Thrushes there is also a different distribution of the two races, but their latitudinal relation is reversed. Thirty-five skins from Los Angeles County, California, are all but one referable strictly to *meruloides*, while the majority of the winter skins from the coast region of central and northern California are near *nævia*. So that *meruloides*, although its summer habitat is northernmost, goes farthest south in winter, and its migration route is much the longest. *Nævia* apparently has a much shorter migration route, probably at most between the latitudes of Sitka and Monterey. The wing-contour seems to offer a criterion by which to judge the length of the annual migration of a bird. By the study of further material I hope to arrive at some more definite conclusions in this regard.

Now, as to the correct nomenclature of the two forms here described, I have had some trouble. *Turdus nævius* of Gmelin is briefly described from specimens taken at Nootka Sound, Vancouver Island. As this is rather within the Sitkan District, I have applied Gmelin's name to the race breeding in that region. I have not seen the description of Pallas's *Turdus auroreus* from Kadiak Island. But the birds from there are probably nearer the Sitkan race, unless they occur only as migrants from further north. For the present, *Turdus auroreus* may be left as a synonym of *nævia*. *Orpheus meruloides* of Swainson was described from a

single male specimen taken at Fort Franklin, 65¼° N. Lat. I have seen no skins from the Mackenzie River region, but judging from the similarity in climatic and floral conditions, I feel fairly certain that the Varied Thrushes of the Kowak Valley and Mackenzie Valley must be similar. An examination of parallel races of other species points toward the same conclusion. I have therefore revived the name *meruloides* for this northern form, in preference to proposing a new name.

ON A COLLECTION OF BIRDS MADE BY MR. T. R. THOMPSON AT THE CAY LOBOS LIGHTHOUSE, BAHAMAS.

BY J. LEWIS BONHOTE, B. A., F. Z. S. L.,

Member of the British Ornithologist's Union.

SOME two years ago when staying at Nassau, Bahamas, I was struck by the ease with which birds could be observed on their migrations at certain times of the year. It therefore occurred to me that it might be of interest if records could be obtained from the various lighthouses round the group of the many species annually passing there on migration. I wrote to Mr. Chapman of the Natural History Museum in New York and through him obtained from Dr. A. K. Fisher of the U. S. Biological Survey at Washington a number of schedules similar to those which were being circulated throughout the Lighthouses of North America. These together with various instructions were sent round to all the lighthouses of the Bahama group, but, I regret to say, have not brought forth much result. Several keepers have written promising their assistance but although they are kept supplied with schedules only one collection has as yet come to hand, the results of which I append below; before doing so, however, I would convey my thanks to Mr. Chapman and Dr. Fisher for kindly procuring me the schedules, and to Mr. Theo. R. Thomp-

son for all the trouble he has taken in collecting and forwarding such interesting observations.

Cay Lobos, the island from which these specimens have been received, is a small cay, situated in 22° 27′ N. lat. and 77° 35′ E. long., about 40 miles north of the coast of Cuba. The schedules have been very carefully filled up by Mr. Theo. Thompson, the light-keeper, who has taken great pains to give as much information as possible, which may prove of great interest if further material is received from other localities. The observations include some 24 species, most of which I have identified from wings, etc., which were collected; of those species marked with an asterisk, however, I have not seen specimens, but have added in parentheses the local name from which I felt justified in identifying them; this still leaves a few records unidentified, which I will mention here, as the local names may possibly be known to some of your members.

"On the 26th November a Woodpecker killed itself against the light. On the 25th February, and again on the 3d May a Bittern was observed on the Cay; between the 26th March and 5th April the following birds were seen, *viz.*: — Snipe, Pigeon, Kingfisher, Chipchip."

Redshanks also arrived to the number of about 900 on the 28th March, and Mr. Thompson adds a note to the effect that "these birds sleep on the Cay every night, and a few breed there." It is in fact the only bird recorded as nesting on the island.

Mniotilta varia.

No. 5, 25th March, 1900, midnight.
Nos. 11 and 12, 2nd and 3rd May, 9 P. M. to 4 P. M.

Parula americana.

No. 4, ♂ and ♀, 1st March.
No. 5, ♂, 25th March.
No. 11, ♂ and ♀, 1st and 2nd May.

Helminthotherus vermivorus.

No. 6, 5th April.

Dendrœca cærulescens.

No. 9, ♀, 26th April, 2 A. M.
No. 10, ♂, 1st May, 2 A. M.
No. 11, ♂ ♀, 2nd May, 9 P. M. to 4 A. M.
No. 12, ♂ ♀, 3rd May, 9 P. M. to 4 A. M.

Dendrœca coronata.

No. 3, 24th November.
No. 4, 1st March, 2 A. M.

Dendrœca striata.

No. 8, ♂ ♀, 25th April, 2 A. M.
No. 10, ♂ ♀, 1st May, 2 A. M.
No. 11, ♂ ♀, 2nd May, 2 A. M.
No. 12, ♂, 3rd May, 9 P. M. to 4 A. M.
No. 14, ♀, 17th May, 8 P. M.

Dendrœca tigrina.

No. 11, 2nd May, 9 P. M.

Dendrœca discolor.

No. 5, ♂, 25th March.
No. 12, 3rd May.

Seiurus aureocapillus.

No. 11, 2nd May.
No. 14, 17th May.

Seiurus noveboracensis.

No. 11, 2nd May.
No. 14, 17th May.

Geothlypis trichas.

No. 10, ♂, 26th April.
No. 11, ♂, 2nd May.
No. 12, ♂ ♀, 3rd May.

Setophaga ruticilla.

No. 11, ♂, 2nd May.
No. 12, ♀, 3rd May.
No. 14, ♀, 17th May.

* Certhiola, sp.? (Banana bird.)

11th May, 2 A.M.

Vireo calidris.

No. 5, 25th March.

Vireo olivaceus.

No. 11, 2nd May.

Ammodramus savannarum.

No. 11, 2nd May.

Dolichonyx oryzivorus.

No. 11, ♂ ♀, in ad. plumage, 2nd May.
No. 13, ♂ ♀, in ad. plumage, 11th May, midnight.

Tyrannus griseus.

No. 11, 11th May.

Coccyzus minor.

No. 3, ♂, 24th Nov., 1899, 2 A.M.

* Crotophaga ani. (Rain Crow.)

A few observed on the Cay on 29th April and again on the 4th May.

Plegadis falcinellus.

No. 5, immature, 22nd February; shot in the daytime. This is the first recorded instance of this bird within the Bahama group.

*** Sula fiber.** (Booby.)

On 14th March 5 birds passed over the station at 5.40 P. M. from the west and did not stop.

*** Graculus dilophus.** (Cormorant.)

On the 1st May, and again on the 18th, a pair of Cormorants, presumably of this species, visited the Cay for 2 or 3 days.

*** Tachypetes aquilus.** (Man-of-War.)

24th Nov., 1899.

*** Phaëthon flavirostris.** (Egg Bird.)

1st March.

Extracts from Schedules.

Date.	*Name of Bird.*	*Weather.*	*Wind.*	*Side of Light struck.*
Nov. 24, 1899	T. aquilus . .	Squally	S.W. 3	N.
" 25, "	D. coronata . .	Fog & Rain	S.W. 3	N.W.
March 1, 1900	D. coronata . .	Foggy	N.	W.
" 25, "	M. varia, P. americana, D. discolor. V. calidris	"	S.E. 1	S.W.
April 25, "	D. striata . . .	Misty	Calm	N.W.
" 26, "	D. cærulescens . .	"	S.E. 1	S.W.
May 1, "	D. cærulescens, D. striata, G. trichas . .	Clear	S.E. 2	S.W.
" 2, "	M. varia, P. americana, D. cærulescens, D. striata, D. tigrina, S. aureocapillus, S. noveboracensis, G. trichas, S. ruticilla, V. olivaceus, A. savannarum, D. oryzivorus, T. griseus . .	Very Cloudy	S.E. 1	
" 3, "	M. varia, D. cærulescens, D. striata, D. discolor, G. trichas, S. ruticilla	Raining	S.W. 4	N.W.
" 11, "	D. oryzivorus . .	"	N.E. 4	S.
" 17, "	D. striata, S. aureocapillus, S. noveboracensis, S. ruticilla .	"	S. 1	N.W.

A VISIT TO AUDUBON'S BIRTHPLACE.

BY O. WIDMANN.

ON THE afternoon of February 26, 1897, I left New Orleans on the East Louisiana R. R. bound for Mandeville, St. Tammany Co., La.

In a straight line Mandeville is only twenty-five miles due north of New Orleans, on the opposite side of Lake Pontchartrain, but by rail the distance is nearly twice as great. The road follows the lake shore through salt water marshes to a point where the lake is only five miles wide, which it crosses on a trestle to the north shore. From there it goes through pine flats north to Pearl River and thence west to the little town of Mandeville, a fashionable bathing place and a frequented summer resort for the inhabitants of the Crescent City. In summer a steamboat line connects the two places, with Milneburg, a suburb of New Orleans, as the starting point.

On the day I left New Orleans the gardens were full of flowers, and in the outskirts a variety of wild flowers were in bloom. Willows and cypresses were covered with young green, and sycamores, sweet gum and others were opening their leaf-buds. On the Mississippi River hundreds of Gulls, Herring and Ring-billed, mostly the latter, were flying up and down and among the numerous ships in the harbor. In the region of the stockyards and abattoirs groups of Black and Turkey Vultures were alighting at the water's edge or soaring in the air above. Looking over the vast cane fields on the other side of the river a faint cloud of White-bellied Swallows could be seen melting into the gray of the horizon.

In the outskirts, a troop of about a hundred Cowbirds was attending a herd of cattle, resting under a huge oak tree, and on the close-cut sward of a meadow an equally large number of Pipits were busily engaged in gathering the necessary means of sustenance for their slender little bodies. Audubon and others were right in surnaming him *ludovicianus*; he is one of the most conspicuous winter birds of Louisiana.

In the marsh a number of Hawks were seen from the car win-

dow. An old Bald Eagle was sitting fearlessly in a tree not far from the train; several Marsh and Sparrow Hawks, and a Rough-legged Hawk, chasing a Marsh Hawk. On the lake only a few Cormorants and Gulls were seen, and long before the train had reached its destination night's lowering shroud excluded farther observation.

The bathing season opens only on the first of May, and at the time of my visit Mandeville presented a picture of grateful tranquillity. The long row of villas fronting the lake looked as if entirely deserted by man. The lawns, the shrubs and trees were occupied by a set of tenants, who take them only for the winter and pay no rent. Yellow-rumped Warblers, White-throated and Chipping Sparrows were the most conspicuous of these winter sojourners but a closer inspection revealed the presence of a score of temporary frequenters of these quiet retreats. The streets, where the stores and dwellings of the stationary population are, are wide and lawn-like; roaming domestic animals keep down all superfluous vegetation with the exception of a few palmettoes, young pines and an occasional blackberry bush. We walk on a green, soft carpet of grass, beset with innumerable bluets (*Houstonia cærulea*). Cardinals, Mockingbirds, Carolina and Bewick's Wrens are in the gardens and on the bird-house sits the Martin with his dear old warble of joy. The owner of the place tells me that the first came February 14, which is not early for southern Louisiana, as in other years they have been known to return from one to two weeks earlier.

Artesian wells furnish the town with an abundance of good water, which runs in rivulets through the streets toward the lake.

On a vacant lot, well within town, a troop of 35 to 40 Meadowlarks is sporting fearlessly and in good cheer; some are singing, others feeding, all seem quite at home in this little town and well pleased with their Louisianian winter quarters. From the thickety border of a slough or bayou, which runs through town, comes the song of the Maryland Yellow-throat and the feline alarm of the Catbird. A Thrasher lights on a garden fence and four female Towhees are hopping in the street, while from the brush comes the warning note of the male.

On a stately water oak, which is now putting forth its catkins

a flock of Bronzed Grackles alights. They sit still for a minute, scanning the surroundings, and then come down into the fenced garden lot to feed. They are mostly males, winter visitants from the North. They go in flocks from place to place and to the common roost at night. The single Grackles which we meet in town are not the Bronzed, but of a different kind with many-colored blotches on their back and a slight difference in the voice. In the early morning, before the hordes of Bronzed Grackles have reached the town from their roosting quarters in the distant marsh, the resident Purple Grackle, which spends the night in trees in town, is in undisputed possession of its breakfast table in the streets.

March 1 found me on the road leading from Mandeville to Fontainbleau, the plantation where Audubon was born May 4, 1780, while his parents were the guests of Marquis de Mandeville Marigny, who lived here in great style, the owner of 500 slaves, mainly employed in the cultivation of sugar cane.

It is only two miles over a good road and the early morning is nice and cool and pleasant for a walk. The Martin is the first to greet us as we leave the hotel at 6 A. M., but there is bird-life everywhere. From the neighboring yards comes the song of the Carolina and Bewick's Wren. In the magnolias which shade the garden are Ruby-crowned Kinglets with their betraying *terek*, and White-throated Sparrows are hopping over the flower beds as thickly as English Sparrows in big cities. The long double row of live and water oaks, which shade the drive along the lake, is alive with Yellow-rumps; and Sapsuckers (*Sphyrapicus varius*) hide behind their trunks.

It is 6.20 now, and several flocks of Bronzed Grackles are passing over, coming from the marsh in the east and going for the cultivated and wooded region in the west.

From the railing of one of the numerous wooden bridges, which lead out to the bath-houses, 200 yards from shore, a Kingfisher drops upon his finny prey, and a little farther out over a hundred Coots and Grebes are gamboling in the shallow water of the lake.

The song of a Chippy comes from a large yard and a big flock flies up into a tree; they like the company of their own species, always go in flocks and do not mix much with other sparrows.

At the eastern edge of town a bayou joins its murky waters with the lake, and vegetation is luxuriant in its realm. Hoary water tupelos (*Nyssa uniflora*) and long-whiskered cypresses (*Taxodium distichum*) skirt its banks, and cat-tails, pitcher plants and mud-plantains fill its bed. The Winter Wren has here his home, and Swamp Sparrows keep him company. The Phœbe pays them frequent visits. Black and Turkey Vultures are not among the early risers; several of them are still roosting lazily in the tupelos, not more than twenty feet above the ground, in perfect unison, both species on one branch.

Shining far through underbrush and timber the yellow jasmine (*Gelsemium sempervirens*) is seen to rear its fragrant golden flowers on twining stem through bushes high up into trees. The shrub-like red buckeye (*Æsculus pavia*) grows here in clusters and is far advanced. Its leaves are nearly of full size and some of its flower buds are ready to break open; only two days more of warm, sunshiny weather and the first Hummingbird will suck its nectar, as the opening of this flower is the signal for the appearing of this impatient little midge.[1]

Here we leave the lake shore and follow the road through wooded, partly cultivated, land eastward. Reaching the corner of an old worm fence, which encloses a large field, lately ploughed, we stop to jot down a lot of species, some of which we have not yet met to-day. Scattered through the weeds along the fence a gathering of Fringillidæ attracts our first attention. They are mostly Field Sparrows, but there are others, too; there are Song and Swamp Sparrows, Towhees, and White-throated Sparrows. Through the fence rails slips a House Wren in and out, and from a tangle of brambles comes the sharp alarm note of the Cardinal and the *ēeorit* of a Thrasher. Out on the ploughed ground thirty or more small birds are walking, running, jumping, sometimes taking short flights in pursuit of winged insects; they are Pipits, the animators of Louisianian winter scenery. But there are other, larger birds near and among them, also running over the ground and taking short flights; these are Killdeers. While we are still taking in the beauties of the landscape with its varied

[1] The first Hummer was seen at Mandeville, March 3.

bird life, a noise is heard over our heads, and looking up we are just in time to see a troop of Pine Siskins (*Spinus pinus*) falling into a leafing sweet gum (*Liquidambar styraciflua*). They came in this tree to rest, but only long enough to see a second troop arrive to take their place. Soon all are off, and we follow their example. A Hermit Thrush, silent and solitary, flies up from the ground and hides behind a tree nearby. Following the road through timber we are struck with its painful silence and are glad to have it broken by the Fish Crows from the lake shore not far off.

Soon we come to another, larger bayou, crossed by a bridge, on which we stop to admire the exquisite scenery. A picturesque cypress, draped with streaming moss (*Tillandsia usneoides*) and its free upper branches softly clothed with newly produced green. This stately cypress in the center is flanked with tupelos of only half its height and smothering under a heavy burden of moss. Upon this hoary background stand in bold relief a few red maples (*Acer rubrum drummondi*) filled with brilliant crimson fruit and supported by a base of different shades of green, willows mixed with scarlet-berried hollies almost to the waters edge, an inky, green-black, sluggish water, fifty feet in width. In the overflow, on oozy ground, a troop of Rusty Blackbirds searches after food and others are concerting in the tree-tops; the males are uniformly black, the females gray, nothing rusty can be seen about them. A few young Red-winged Blackbirds, males and females, are among them.

At last we reach the gate of Fontainbleau and behold a vast extent of barren land; weeds and vines, mingled in places with sprouts from stumps, and scattering trees; herds of horses and cattle, and in a distance of almost a mile a few low, uninteresting buildings. The transformation of a first-rate sugar plantation into a third-rate stock farm has left no trace of its former splendor.

The foundation of the mansion, in which Audubon first saw the light of day, is still there, but the walls have crumbled into a heap of bricks, which fill the cellar. The whole is overgrown with rank vegetation, crowned by trees rooted in the ruin.

From the large sugarhouse, which has two chimneys and some of the walls still standing, a broad avenue leads straight down to the

former landing place on the lake. This avenue is shaded by two rows of immense live-oaks, twelve on each side. Between every two trees and in a line with their trunks there stood at Audubon's time a cabin for two families having one big chimney in common; one of these chimneys is still standing, but all others are only a heap of disintegrating bricks, showing the transitoriness of all earthly things. Man's handiwork is all changed, but Nature's grandeur is the same; the trees, the lake, and the waves that strike its shore; the Mocker sings as cheerfully as it did then, and the Vultures soar as dreamily as of old.

While coming through the wild pasture land we noticed but few birds. Several Song Sparrows emerged from their recesses, looked with astonishment at the intruder, and disappeared. A small troop of Grass Finches (*Poœcetes gramineus*) was surprised, feeding in the road, and a number of Flickers started from the ground. A Sparrow Hawk kept moving from tree to tree, and the wandering voices of Goldfinches and Purple Finches were in the air. Of especial interest was the meeting with a troop of Common Crows (*Corvus americanus*), which are not abundant so far south, at least not at this date. Scattered over the cheerless waste were several Mockingbirds and Shrikes, all earnestly engaged in the pursuit of game. Perched on the top of a stout weed and in a hawk-like attitude, scrutinizing the surrounding ground, they resemble each other very much. Both whip their tail, and both spring upon their prey in the identical manner, and also in their musical reveries the listener is struck with a strange semblance.

After 9 A. M. the sun is pretty warm on the Gulf Coast, even on the first of March, and when the Pine Warbler's song reaches our ear from the adjacent woods, we can not resist the temptation to invade the privacy of its domain. Before we enter the woods we cast another look upon the scene we leave: a scene of dreary desolation, whose gloom neither the sun's rays nor the arrival of a hungry drove of White-bellied Swallows can dispel. And to complete the dismal picture a number of Turkey Vultures are drawing ominous circles through the blue above. While the woods in the watery region near the lake are bare deciduous trees of many kinds, those farther back on drier soil are made up chiefly

of the long-leafed pine (*Pinus australis*) with an undergrowth of palmetto, young pines and blackberry bushes. These pines are hung with moss, but much less so than the trees on damper ground. Our Pine Warbler has been singing all the while its simple ditty at the rate of once every ten seconds. It is one of those vexatious songs, which tax our patience not a little. Sometimes you think it comes from nearby on the ground, when really the bird is way off in a tree-top. He is the only songster in these woods at present, and with him census-taking is an easy task, resulting in the sweeping annotation: A common and industrious songster in the pine woods. Besides his song he has various calls, one of which recalls the twittering of Swifts.

Often when we are trying to discover the indefatigable musician, or when we follow his flycatching antics in the outer branches, we notice scales of bark dropping from on high beside a tree. This is the work of the Red-cockaded Woodpecker (*Dryobates borealis*); the pineries are his home and, though he makes but little noise and hugs seclusion on the off-side of the trunk, the flying chips of bark betray his whereabouts. But to-day the Red-cockaded are not silent; they chirp and chase and quarrel and frolic and, when they light against a tree, they make the bark fly with a vim, as if putting all their mirth and passion in that bill, emitting all the time a note which reminds one strongly of a Robin's.

The Pine Warbler, the Red-cockaded Woodpecker and the Brown-headed Nuthatch form a triumvirate group, truly characteristic of these piny woods. When you see one, you will soon hear or see the other. The first of March is mating time with all of them, the most favorable days for observation. At other times an inconspicuous little midge, the Nuthatch draws to-day as much attention as the other members of the coalition. What he lacks in size, he makes up in restlessness and noise. With squeaking notes they chase each other through the woods, or measure trees by nervous hops out to the farthest end; a violent emotion sways their diminutive bodies and allows them to rest only long enough to emit a little song, a few really musical notes, the last of which recalls one of the Goldfinch's. Thus they follow each other from branch to branch, from tree to tree, until at last the impetuous knight carries his prize, and peace ensues once more in these

usually silent woods. They are not void of bird life, but the resident birds, if not excited, are not loud, and the winter guests from northern lands are naturally very quiet among strangers in the fremd.

Soft *peos* of the Tufted Tit are heard sometimes, but the species does not seem to be so loud as farther north. Its cousin and companion, the Carolina Chickadee, is also heard from time to time, but the Woodpeckers, the Downy, the Hairy, and the Red-bellied, do not say much, while the Sapsucker says still less. With the exception of the Flicker, the Sapsucker is the most numerous of its tribe, and you are just as likely to find him with the Kinglets and Yellow-rumps in the magnolia of your garden, or with the Robins and Cedar-birds in the hollies at the bayou, as in the deep pine woods. Rather surprising at first is the presence of a bevy of Bob-whites and a troop of Meadowlarks in the pine woods, but they appear to feel themselves as much at home there as the Flicker in the marsh or meadow.

The bird fauna generally is quite varied in Louisiana at the first of March, though migration from the south has not yet set in. Of the species which regularly leave the State in winter only the Martin has returned, but migration begins soon after and becomes brisk by the middle of the month.

A STUDY OF THE GENUS *MACRORHAMPHUS.*

BY REGINALD HEBER HOWE, JR.

EVER since Thomas Bell and George N. Lawrence in 1852, in the 'Annals' of the New York Lyceum of Natural History (Vol. V, pp. 1–5), recognized that long- and short-billed forms of this genus existed, ornithologists have either been loath (Coues, Birds of the Northwest, p. 477) to accept the two forms, or have been puzzled to identify many specimens in the collections.

A month or two ago while examining some fifteen specimens of this genus in search of a male Long-billed Dowitcher, the fact of

the tremendous sexual variation in size of the Dowitchers was brought to my notice. So very marked was this sexual variation in specimen after specimen examined, and so weak did any color difference appear, that I was at first strongly led to believe that the species *griseus* represented the males and *scolopaceus* the females of one and the same species. Only after the examination of many breeding specimens, over thirty in number, did I become convinced that a subspecific difference exists. I believe, with Dr. Ridgway (Bull. N. O. C., Vol. V, pp. 157–160) that *scolopaceus* should stand as a subspecies and out of which rank I cannot see why it was taken, as intergrades unquestionably exist. I have examined over two hundred and fifty specimens of the genus *Macrorhamphus* with the result that I find that *adults* of the two species, in summer or winter plumages, are to be determined almost invariably by the criterion of *bill* measurement *alone*, and if in breeding plumage to be even more easily separated. I have been also able from the large series before me to more definitely fix both the breeding ranges and the migratory route of the two forms.

In regard to the sexual variation shown in the order Limicolæ, it is interesting to note that in the Pectoral Sandpiper (*Tringa maculata*) (see Auk, Vol. XVI, p. 179, and Vol. XVIII, p. 107), the *males* exceed the females in size, while in the present genus the *reverse* is true. The Wilson's Snipe (*Gallinago delicata*), American Woodcock (*Philohela minor*), the genera *Limosa* and *Numenius*, all show this latter type of sexual variation to a greater or less degree.

Macrorhamphus griseus *Gmelin.*

Geographical Breeding Range.— The breeding range of this species is given as "within the Arctic Circle" in Chapman's 'Hand-book' (p. 155), based on what data, other than hypothetical, I am ignorant. We know, however, from various sources[1] that it breeds in Ungava. Its breeding range I think can be safely said to be to the north and northeast of Hudson Bay, from the 55th parallel northward to Greenland,[2] probably also a little

[1] Turner, Birds of Labrador, 1885, p. 246; Stearns, Bird Life in Labrador, 1886, p. 53.

[2] Arctic Manual and Instructions, 1875.

to the northwest of it, perhaps to the 100th meridian of longitude.[1] Reek's mention[2] of it as breeding in Newfoundland is too vaguely stated for recognition.

Migratory Routes.— The migratory route of this species, as will be seen by the accompanying map, is down the Atlantic coast, becoming less marked as it progresses southward, until at the Carolina's it seems to pass in the main off the coast, perhaps to the West Indies and Bermuda where it has been recorded.[3]

The specimens obtained in the Western States are no doubt stragglers, offshoots from the main migration; those from Lower California and Mexico, wintering birds.

Characteristics of summer plumage: Adults. — Upper parts black, the feathers *lightly* edged with *white* or buffy, hardly altering the almost black appearance of the back and crown. Uppermost tail-coverts white, *spotted* with black; tail feathers white barred with black and *white*, the median ones rarely with *pale* buff. Breast *yellowish* rufous, *spotted* well down on the abdomen.

Characteristics of plumage in transition stages. — *M. griseus* can be generally distinguished by the black and *white* barred tail feathers, and *yellowish* shade of rufous underparts, as long as any of this color is perceptible. Also by the *spotted*, not barred, uppermost tail-coverts.

Characteristics of plumage in winter. — *M. griseus* can generally be told by the close *spotting* of the uppermost tail-coverts.

Characteristic plumage of young. — Upper parts fuscous bordered and barred with *buff*, breast paler, very faintly marked.

Measurements.[4]

Adults males	Bill (culmen)	2.01–2.32	(ave. 2.21+)
" females[5]	" "	2.35–2.56	(ave. 2.44+)
Young males	" "	2.04–2.31	
" females	" "	— 2.40	

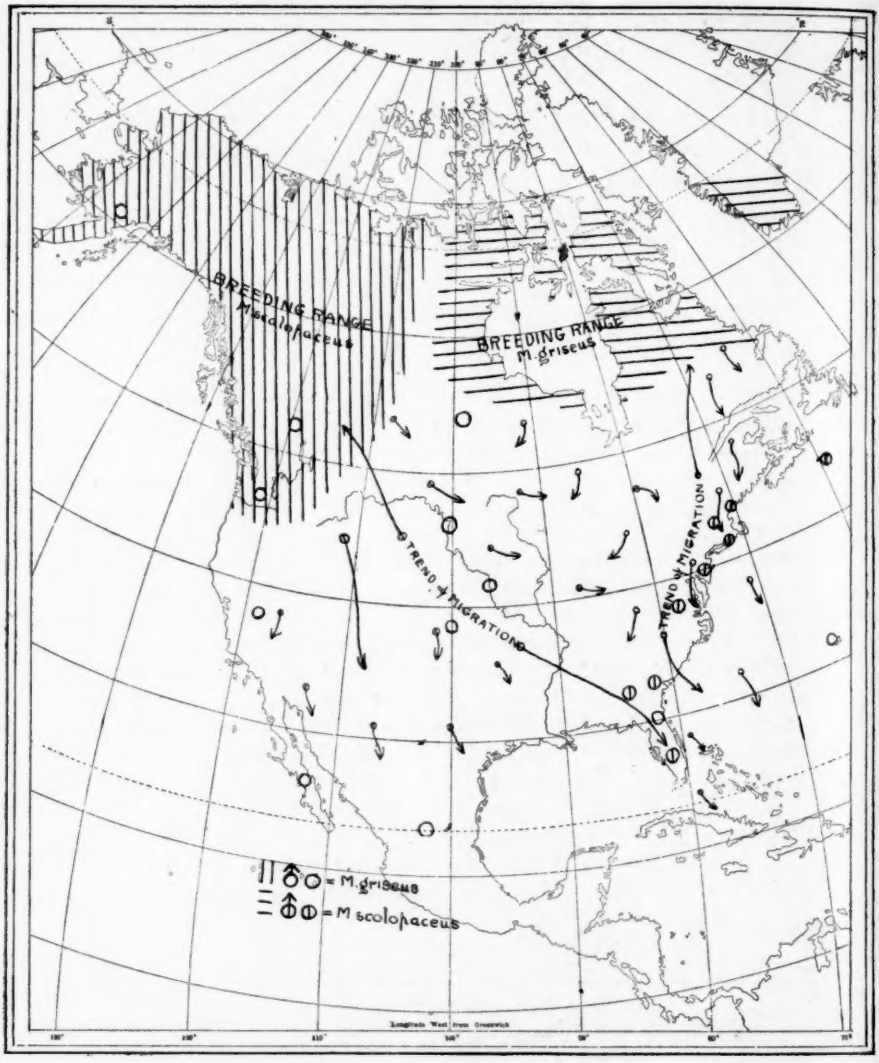
[1] Wright, teste Macoun, Birds of Canada, Part I, pp. 153, 154.

[2] Canadian Nat., Vol. V, new series, 1870, p. 294.

[3] Cory, Cat. of West Indian Birds, p. 92; Reid, Birds of Bermuda, Bull. U. S. Nat. Mus., No. 25, 1884, pp. 233, 234.

[4] Taken from breeding specimens or birds having attained or still in the breeding plumage, either in proximity of their breeding grounds or from the centre of their migration routes, and which were absolutely identifiable from their coloration.

[5] In one extreme specimen, perhaps wrongly sexed, 2.21.



Map showing Breeding Ranges and Migration Routes of *Macrorhamphus griseus* and *M. griseus scolopaceus*.

Macrorhamphus griseus scolopaceus (*Say*).

Geographical Breeding Range.—This form seems almost confined to Alaska in the breeding season, certainly extending no farther east than the 110th meridian of longitude or south of the 48th parallel of latitude in British Columbia.

Migratory Routes.—The trend of the migration route of *scolopaceus*, as shown on the accompanying map, seems to be in a northwesterly-southeasterly direction in the main to the east of the Rocky Mountains. Offshoots from the main route reach the Pacific and Atlantic coasts, on the latter not uncommonly from Sable Island southward. Perhaps a few work up the coast from Florida where they are by far the most common of the two forms on migrations, especially in November and February.

Characteristics of summer plumage: Adults.—Upper parts black, the feathers *strongly* edged and marked with deep *rufous;* this is especially so in young birds, giving the back and crown a *mottled* black and rufous effect. Uppermost tail-coverts white generally *barred* with black, outer tail feathers white barred with black, median ones barred with black and *rufous.* Breast *salmon;* throat spotted with round arrow-shaped markings; breast and flanks *barred* with black.

Characteristics of plumage in transition stages:—*Scolopaceus* can be distinguished well into the autumn and in the early spring by the barred *rufous* and black median tail feathers, and *salmon* tinge of the breast coloring.

Characteristics of plumage in winter.—*M. g. scolopaceus* can generally be told by the *barred* uppermost tail-coverts.

Characteristics of plumage of young.—Upperparts black, heavily bordered and marked with *deep rufous;* tips of the median tail feathers barred with black and *rufous;* throat whitish, faintly marked; breast light salmon lightly marked with *arrow*-shaped spots of dusky, abdomen pale salmon.

Measurements.

Adult males[1]	Bill (culmen)	2.23–2.71	(ave. 2.45+)
" females[1]	" "	2.40–3.04	(ave. 2.71+)
Young males	" "	1.90[2]–2.59	
" females	" "	— 2.67	

[1] Extreme specimens of males measure 2.11 and 2.80 (the latter perhaps erroneously sexed); of an extreme female 3.08.

[2] Still showing down.

For the use of specimens or generous assistance my thanks are due to Messrs. William Brewster, Walter Deane, H. B. Bigelow, Outram Bangs, Witmer Stone, Drs. J. A. Allen, Robert Ridgway, Jonathan Dwight, Jr., Walter Faxon, Louis B. Bishop, Mr. A. H. Norton, and others.

BIRDS OF PREY AS OCEAN WAIFS.

BY H. W. HENSHAW.

IT IS no unusual event, as every ornithologist knows, for land birds to board ships, when a greater or less distance off land, or to be seen from their decks as they wing an aimless course over the ocean. It is fair to infer that such known cases are very few, compared to the number of birds that are forced off land by unfriendly gales and that finally perish miserably in the depths of ocean unseen of human eye. After once losing sight of land, few of the comparatively weak-winged land birds are likely ever to regain it, and no doubt many of the powerful-winged species become hopelessly lost when once the friendly land has faded from view. The ocean is no friend to the land bird, but annually exacts its deadly toll with unfailing certainty.

Two unusually interesting instances of birds taking refuge on board ships have recently come to my notice, and, as they possess special interest to American ornithologists, I here record them. Both cases have been communicated by Capt. Peter Johnson of the bark 'Roderick Dhu' which sails between San Francisco and Hilo.

In May or June of 1897 a brown hawk boarded the 'Dhu' when some 200 miles outward bound from Hilo and, as one sure of its rights, took through passage to California. The bird chose the end of the starboard royal for its perch, and maintained its place all the way over, save when it made excursions from the ship after "small birds." Just what the latter were is not certain, though the Captain surmised, with much probability, that they

were petrels. The hungry hawk seemed able to descry its prey when a long distance off, for it frequently flew out of sight on its predatory excursions but, sooner or later, it always returned to the same perch.

Though the certain identification of this "brown hawk" is not possible, there can be little doubt that it was the Hawaiian *Buteo solitarius.*

This particular individual must have been more expert at catching birds than its fellows usually are in Hawaii, for during the voyage it was seen to return to the ship from at least a dozen successful bird catching expeditions. Necessity is indeed a sharp spur. Though the Io sometimes catches birds in Hawaii, the occasions are comparatively rare, rats and mice, the larvæ of the sphinx moths, and large spiders constituting by far the larger part of its food.

That the prey of this particular individual consisted of birds there is not the slightest doubt, for the feathers plucked from the body of its victims frequently floated to the deck below. The litter thus made excited the wrath of the mate who more than once suggested shooting the hawk by way of retaliation. Fortunately this was not done, and, about the time when the California coast was sighted, Io left the ship flying landwards and was seen no more. Possibly it was shot later by some enterprising collector, and may yet figure again in ornithological literature.

The particular interest of the voluntary (in part at least) voyage to California of this particular hawk appears when are recalled the facts relating to the specimen described in 1879 by Mr. Ridgway as *Onychotes gruberi.* This bird, as Mr. Ridgway himself has shown, is a typical *B. solitarius.* At first supposed to have been shot near San Francisco, if I remember correctly, the presence of this specimen in a California bird collection was afterwards otherwise accounted for, and the occurrence of the species in California as an accidental visitor was discredited. The facts here recorded, however, considerably increase the probability that the specimen upon which *Onychotes gruberi* was based actually reached California alive, possibly by the same means as the individual here mentioned.

Buteo solitarius, though sluggish of movement and slow of wing,

is a powerful flier, like its congeners, and I have little doubt of its ability, unaided, under favorable conditions, to fly from Hawaii to the California coast (about 2000 miles), provided a straight course was maintained — a most unlikely supposition. The chances, however, of an individual actually making this long flight are of course extremely slight.

In October, 1900, when some 500 miles to the northwest of the Hawaiian Islands, the 'Dhu' was boarded by an owl, which, from its size and description can have been no other than the Short-eared Owl (*Asio accipitrinus*). The bird alighted in the rigging, and was so fagged as to be easily caught by hand. It was placed in a coop but would eat nothing and died in a week or so.

The chief point of interest regarding this waif is as to the place it came from. Its proximity to the Hawaiian Islands when it flew aboard the ship may be thought to indicate that it was blown out to sea from one of these, every member of the group being inhabited by this species.

Upon the other hand, the season of the year, the direction of the wind (which was from the northeast), and the evident exhaustion of the bird point to the possibility, if not the probability, that the owl was from the northeast and was of American origin.

There is little doubt that the owls which originally stocked Hawaii came from America and, although the island residence of the species has been long enough to firmly fix the owl in Hawaiian mythology and even to elevate it to a place in the Hawaiian Pantheon, it has not sufficed to impress upon it distinctive or varietal characters.

My own opinion upon this latter point is entitled to but little weight, since I have had no opportunity to directly compare island birds with specimens from the mainland; but so far as I can judge the island specimens are not distinguishable. In confirmation of this opinion I quote the following remarks of Dr. Stejneger: "The four specimens of Short-eared Owls from the Hawaiian islands before me do not justify the retention of *Asio sandwichensis* as a separate race." (Proc. U. S. Nat. Museum, p. 85, 1887.) Mr. Scott B. Wilson states that this opinion was shared by the late Mr. J. H. Gurney (Birds of the Hawaiian Islands).

So far as I am aware there is no evidence to show that the owls

of the Hawaiian Islands are migratory. I have little doubt, as stated above, that the island strigine stock was derived from America; probably from Alaska. The occurrence of the bird above mentioned, 500 miles at sea and under the circumstances narrated, is most reasonably accounted for on the supposition that it had flown from the Alaskan coast, from which, at this season, thousands of plovers, turnstones, ulili, and ducks are migrating to the islands. An owl might readily follow the track of these birds, and be piloted directly to the islands which, otherwise, there would be small chance indeed of its reaching.

Once here, however, the wanderer is likely to remain, though, of course, it is impossible to say that a stray bird from the mainland might not choose to return home in the spring when it would find plenty of plovers and other birds bound for its own home.

It must not be forgotten, however, that the Short-eared Owl breeds abundantly upon the islands, where its distribution is local and the pairs seem to inhabit the same locality indefinitely. New additions from America (and these probably are few in number and arrive at long intervals) are much more likely to mate with the island birds already established than to part company with them and to undertake the hazardous experiment of a return. The islands appear to be well adapted to the habits of this, the only owl that so far has reached them, and although persecution of late years has diminished its numbers it is still far from uncommon.

DESCRIPTION OF A SUPPOSED NEW SUBSPECIES OF *PARUS* FROM NEW MEXICO.

BY FRANCIS J. BIRTWELL.

IN THE valley of the Rio Grande, about Albuquerque, New Mexico, during a residence covering two winters, the writer has noticed a peculiarity existing among the chickadees which pass through in the brief migrations from the high mountains and those wintering in the valley.

In brief, while the migrants are of the normal colors as well as those birds wintering in the cedar covered foothills about twelve miles from the valley, and those breeding among the mountain parks of the Pecos River Forest Reserve, the winter residents of the valley are heavily melanistic, and no ordinary chickadee appears to occupy the valley in the cold months with them. In the early spring the melanistic birds vanish and are not observed again until the next cold weather. These statements are also supported by the results of twenty-one years observations of Mr. W. H. Cobb of Albuquerque, about that city, which collectively considered, oppose the possible suggestion that the melanistic birds are but occasional examples of melanism.

Examinations of a large series of specimens show the strange birds to be peculiar to the Rio Grande valley alone, in the vicinity of Albuquerque. Sixty specimens kindly loaned from the National Museum exhibit no examples or even transition forms and these embrace specimens of various seasons from California, Nevada, Oregon, Utah, Colorado, Arizona and New Mexico. The nearest approach to the supposed new form is from Palmer Lake, Colorado, but the resemblance is slight.

As shown by these specimens and by others, as well as many collected personally, the winter form of the valley deserves at least subspecific recognition. Specific rank is possible, but the birds belong to the *gambeli* series and bear the same relation to *Parus gambeli* as *Bueto borealis calurus* bears to *borealis*.

It is proposed to describe the new form as follows:

Parus gambeli thayeri, subsp. nov.

Type, No. 226, author's collection, adult, sex?, Albuquerque, N. M., Dec. 27, 1900.

Habitat (so far as known): Valley of the Rio Grande, near Albuquerque, in winter.

Subsp. char.— Similar to *Parus gambeli*, but whole body markings, including the white of head and underparts, the black head areas, the ashy shade of the dorsum and the wings and tail, overcast with dull, heavy melanistic effects. In the type specimen the underparts are blackish slate slightly tinged with tawny on the sides, and this intensity represents the average example as observed by me. Bill and feet as in *gambeli*, black.

Measurements: Length, 4.85 in.; extent, 8.00; wing, 2.60; tail, 2.45; tarsus, .62; culmen, .30.

Compared with all available material the new form is clearly recognized at a glance, and with those specimens from northern California, Oregon, and Nevada, having very light underparts shaded with ochraceous, especially so.

I take pleasure in naming this peculiar bird after my generous friend Colonel John E. Thayer of Lancaster, Mass.

THE PTERYLOSIS OF *PODARGUS:* WITH NOTES ON THE PTERYLOGRAPHY OF THE CAPRIMULGI.

BY HUBERT LYMAN CLARK.

THROUGH the kindness of Mr. F. A. Lucas of the National Museum, a very fine alcoholic specimen of *Podargus* recently came into my hands for the study of its pterylosis. Unfortunately there is no label with it to indicate either the species or the locality. It is not likely, however, that specific variations in the pterylosis of this genus are any greater than among the other Caprimulgi, where they really amount to very little. Nitzsch says that the pterylosis of *Podargus gigas* is entirely like that of *Caprimulgus*, excepting the dorsal tract, but as his examination was probably of a dried skin, it is not surprising that he overlooked some very important differences. As a matter of fact the pterylosis of *Podargus* is very distinctive and shows some very interesting and important peculiarities.

The front part of the head at the base of the upper mandible is densely feathered and this tract continues backward over the crown as a broad median band. On each side of this, just above the eye, is a single very distinct row of contour feathers. The back of the head is very fully feathered and the upper cervical tract is strong, and divides into two forks which extend to the end of the shoulder blades. The dorsal tract is forked for a much greater distance than in any North American goatsucker; its two

branches are slender and nearly parallel. The humeral tracts are strongly developed and unite over the shoulder with the ventral tracts. The femoral tracts are very large and in the specimen before me consist of two very distinct parts: an outer band which runs forward from near the base of the tail, along the posterior side of the femur, and *directly across the tibia, just above the middle*, and a large patch on the femur just above this band. The latter patch is made up of about fifty short, thick and very oily feathers, as the new feathers were just appearing here. It is possible that these patches had recently been moulted, but there were no young feathers anywhere else on the bird, and I am inclined to think that in the great reduction or absence of the oil-gland, these patches furnish the oil for preening the plumage. (The examination of a few skins would soon settle this point.) There is a small but distinct pteryla on the front of the tibia. The lower cervical tract is narrow and forked far up on the throat. On the chin the feathering is confined to about five somewhat separated rows, which form a longitudinal band with convex sides in the middle of the infra-mandibular space. The ventral tracts are wide on the breast but narrow on the belly, and are connected with the hypopterum by a very large and evident 'hook' of feathers, on the sides. The oil-gland is entirely wanting in the specimen before me. The feet are feathered only to the tarsal joint. The filoplumes are very long and slender. There is no true down. The aftershaft is reduced to a mere scale only about 1 mm. long and bearing no barbs, but the barbs of the two sides of the feather meet at its base. There are no rictal bristles. The rectrices are 10 in number, the middle pair longest, the outer shortest. The alula contains 4 feathers. The wing is aquincubital and there are 14 secondaries. The primaries are 10 in number, of which the sixth, seventh and eighth are longest. Nitzsch gives only 21 remiges to *Podargus*, but there are clearly 24 in the specimen before me.

Just before Mr. Lucas sent me *Podargus*, a very good male Chuck-wills-widow (*Antrostomus carolinensis*) came into my possession, and the examination of its pterylosis proved of considerable interest. It differs very decidedly from that of the Whip-poorwill, quite as much so as from any of the North American

Caprimulgi. There are ten longitudinal rows on the crown and their arrangement is somewhat as in *Nyctidromus*. The pterylosis of the head, however, differs from that of all other North American genera in the much greater density of feathering on the front and sides of the forehead, and on the back of the crown. The median band on the front of the crown is also broader and denser than in the smaller Caprimulgi. The row of pinnate rictal bristles is very prominent. The upper cervical tract forks very widely: the branches are narrow and are indistinctly connected with the ends of the humeral tracts. The dorsal tract is deeply forked anteriorly and well-defined. It is also forked at the base of the oil-gland, so that there is a distinct apterium there, as in some of the owls. The femoral tracts are rather large but are entirely confined to the femurs. The ventral tracts are broad on the breast and narrow gradually on the belly, each longitudinal row being successively shorter, beginning with the innermost. The 'hook' connecting this tract with the hypopterum is very prominent. The feathering of the infra-mandibular region is very sparse, consisting of 9 longitudinal rows. The tarsus is feathered nearly to the toes in front. Aftershafts are large, the oil-gland is bare, the filoplumes are long and down feathers are wanting. There are 10 rectrices, of which the middle pair are longest. There are 10 primaries (8, 7, 9, 6, 5, 4, 3, 10, 2, 1), 14 secondaries and 3 feathers in the alula. The wing is aquincubital. Judged from the pterylosis alone, there is no justification for uniting the Chuck-wills-widow and the Whip-poorwill in the same genus, for they differ quite as markedly as any other two American genera. We may therefore refer the former to *Antrostomus* and the latter to *Caprimulgus*, though it may be the European species of *Caprimulgus* do not agree with it in detail. It is impossible to determine from Nitzsch's figure.

Podargus and *Antrostomus* are much larger than any of the American genera which have been examined hitherto and several of their peculiarities (as for example the large number of secondaries) are doubtless due to their greater size. But in most, if not all of the points in which they differ from other Caprimulgi, they seem to approach the owls, and thus confirm the opinion which I expressed in 1894 (Proc. U. S. Nat. Mus., Vol. XVII, p. 572) that, judged by their pterylography, "the Caprimulgi are related

to the Striges and not very distantly either." This intermediate position of *Antrostomus* and *Podargus* will be made more evident by the following table (Table A) in which the characters of these two genera are contrasted with those of the other North American Caprimulgi and the Owls. The characters in which all these groups agree, as the absence of down, the aquincubital wing, etc., have purposely been omitted from this table.

It will readily be seen that with the exception of the sternal tracts and the number of primaries, no sharp line can be drawn pterylographically between the Caprimulgi and the Striges, *Antrostomus* and *Podargus* furnishing just such intermediate characters as might be expected from their size and habits. As there are still many interesting genera to be examined, even these two differences may prove to be inconstant, and the accumulated evidence thus confirms the view that Goatsuckers and Owls are near relatives.

Nitzsch says that the pterylography of the Caprimulgidæ is very close to that of *Cypselus* but he must have expected to find a resemblance or it never would have occurred to him. Thanks again to Mr. Lucas, I have had the opportunity of examining the pterylography of ten species of Swifts. The different genera resemble each other very closely but I find very few important resemblances between the Cypseli and Caprimulgi and some striking differences. Indeed the general pattern of the pterylosis is strikingly different and there seems to be no connecting links. The contrast will be made clear by the table (Table B).

A full report on the pterylography of the swifts is in preparation; the only reason for referring to it here is to emphasize the fact that the nearest relatives of the Caprimulgi are not to be sought among the so-called Cypseliformes or Macrochires, but much more probably among the nocturnal birds of prey.

TABLE A.

	Median Band on Crown	Feathering of Forehead.	Sternal Tracts.	'Hooks' on Sides.	Femoral Tract.	Tibial Tracts.	Apterium in front of oil-gland.	Feathering of Tarsus	Rictal Bristles.	No. of Primaries.	Longest Primaries.	No. of Secondaries.	No. of Alula Feathers.	No. of Rectrices.	Aftershafts.
North American Caprimulgi . .	Narrow.	Sparse.	Single, broad.	Weak.	Clearly marked; confined to femur.	Wanting.	Wanting.	Partial or none.	Simple, usually present.	10.	8, 9, 7, and 10.	12-13.	3.	10.	Present.
Antrostomus . .	Rather narrow.	Rather dense.	do.	Rather strong.	do.	do.	Present.	Considerable.	Pinnate.	10.	8, 7, 9, and 6.	14.	3.	10.	do.
Podargus . . .	Rather broad.	Dense.	do	Strong.	In 2 parts; lower crosses tibia.	Present.	Wanting	None.	Wanting	10.	6, 7, 8, and 5.	14.	4.	10.	Practically wanting.
American Striges	Broad.	Very dense.	Separate from and overlapping ventrals, narrow.	do.	Strong; crosses tibia.	Sometimes present.	Present.	Very considerable.	do.	11.	6, 7, 8, and 5 or 9, 8, 7, and 10.	13-16.	4.	10-12.	Wanting.

TABLE B.

	Pterylosis of Crown.	Nuchal Apterium.	Upper Cervical Tract.	Humerals and Femorals.	Sternals and Ventrals.	Condition of Wing.	Longest Primaries.	No. of Secondaries.	No. of Alula Feathers.
Caprimulgi.	Sparse; in longitudinal rows.	Wanting.	Narrow, forked, separate from dorsal tract.	Completely separate.	Broad; narrowing posteriorly.	Aquincubital.	Usually 8, 9, and 7; rarely 6, 7, and 8, or 10, 9, and 8.	12-14.	3-4.
Cypseli.	Dense; no longitudinal rows.	Present.	Broad: united with dorsal tract.	Clearly united.	Rather broad; narrowed at each end.	Quincubital or Aquincubital.	10, 9, and 8.	8-11.	2-3.

The groups agree in having 10 primaries, 10 rectrices, a bare oil-gland, an aftershaft, and no down.

REPUBLICATION OF DESCRIPTIONS OF NEW SPECIES AND SUBSPECIES OF NORTH AMERICAN BIRDS. NO. II.

BY J. A. ALLEN.

THE first series of these descriptions was published in 'The Auk' for October, 1899 (XVI, pp. 338–350), in response to requests therefor, as there stated. The first installment covered the years 1897, 1898, and most of 1899, and included those added in the Ninth Supplement to the Check-List (see Auk, XVI, 1899, pp. 97–133). The present installment covers the year 1900, with a few species published in the latter part of 1899.

In this 'republication,' as explained in the introduction to the first installment, the original diagnoses or descriptions are given in full, in the exact words of the author, unless otherwise indicated by the omission of marks of quotation, with such additional remarks as are necessary to a proper presentation of the case.

Colymbus dominicus brachypterus (*Chapman*).

Colymbus dominicus brachypterus CHAPMAN, Bull. Am. Mus. Nat. Hist. XII, 1899, 256, Dec. 23, 1899.

"*Char. subsp.* — Similar to *Colymbus dominicus* Linn., but with shorter wings and bill, less fuscous on the sides and flanks, and whiter underparts.

"*Description of type.* —(No. 11, Coll. George B. Sennett, male, Lomita Ranch, Lower Rio Grande, Texas, April 27, 1878. Collected by George B. Sennett.) — Head and neck all around plumbeous, the crown greenish; the throat black, some of the feathers tipped with whitish; back fuscous with slight greenish reflections; wing-coverts, tertials, and exposed part of outer primaries fuscous; basal portion of inner web of first primary white, this white increasing in extent on each succeeding feather until it wholly occupies the seventh to twelfth feathers, when it decreases and is replaced by fuscous; neck slaty, breast washed with brownish, fainter on the sides; sides and flanks washed with fuscous; rest of underparts silvery white, through which the darker bases of the feathers show only slightly. Wing, 3.80; tarsus, 1.25; middle toe, 1.78; culmen, .82; depth of bill at nostril, .30 in.

"*Description of female,* No. 12, Collection of George B. Sennett, Lomita,

Texas, April 27, 1878. — Similar to the male, but whiter below and slightly smaller. Wing, 3.78 ; tarsus, 1.10 ; middle toe, 1.62 ; culmen, .68 ; depth of bill at nostril, .25 in.

" This, the northern continental form of *Colymbus dominicus*, is to be distinguished from *dominicus* by its whiter underparts, smaller bill, and shorter wing; while from *C. d. brachyrhynchus* it may be known by its larger bill, shorter wing, and whiter underparts."

Arenaria morinella (*Linn.*).

RUDDY TURNSTONE.

Tringa morinella LINN. Syst. Nat. ed. 12, 1766, 249. Based on the " Turn-stone, or Sea-Dottrel " of Catesby.

Arenaria morinella W. PALMER, Fur Seals and Fur-Seal Islands of the North Pacific Ocean, Pt. III, 1899, 412–418.

" *Adult* ♂, *breeding plumage.* — Similar in pattern to *A. interpres*, but smaller and general color above chestnut with sides of interscapulars black; scapulars for the most part chestnut, the outer feathers broadly tipped with black and slightly with white, longer feathers blackish olive irregularly tipped with chestnut; body, head, and neck as in *interpres*, but the black of the breast less extensive and narrower, white areas on head more extensive, and the black streaking on top of head with whiter edgings; wings with more extensive white areas ; tertials various shades of clove brown, rarely blackish, broadly blotched, margined and tipped with chestnut with white tips; lesser wing coverts pale dusky olive, with much less black and more white posteriorly than in *interpres* ; median coverts extensively chestnut with little or no blackish centers; long coverts chestnut with black blotches or narrow bands near the tips of the feathers ; tail as in *interpres*, but usually less broadly banded and [bands] less sharply defined; legs and feet deep orange-red strongly and broadly crossed at the joints with blackish ; bill black.

" *Adult* ♀, *breeding plumage.* — Similar to the male in pattern, but larger and more subdued in color, grayer with white of head and neck obscured with dusky; chestnut of mantle obscured with dark streaking; chestnut all over much less rich than in males ; pileum less strongly black, with wider rufous edgings; median wing coverts, mixed grayish and pale chestnut with dark sometimes black center streaks; much grayer and less black than in ♀ *interpres*; tail band as in ♂ but duller; long tertials more plain colored, less positively chestnut-tipped and margined; feet and tarsi as in ♂."

The immature plumages are fully described, and altogether six quarto pages are given to the description and discussion of the species.

Geographical range.— "America from the Arctic regions north of Hudson Bay and westward to the Mackenzie River, along the Atlantic watershed, though generally coastwise, to Patagonia and the Falkland Islands. Rare on the Pacific slope. Breeds about Hudson Bay, northward and eastward."

A. morinella is stated to be smaller than *A. interpres*, with chestnut prevailing above instead of black, and with the feet orange-red instead of vermilion. *A. interpres* is mainly Old World, but extends to Alaska and Greenland, *A. morinella* being its North American representative.

Asio accipitrinus mcilhennyi *Stone.*

Asio accipitrinus mcilhennyi STONE, Proc. Acad. Nat. Sci. Phila. 1899, 478.

"Very much paler than specimens from Pennsylvania and have the tawny tints largely replaced by white. The lower surface is white with a slight buff suffusion in some examples, while the dark stripes on the breast average narrower than in more southern specimens. The females are slightly darker than the males. In measurements they agree pretty well with specimens from the United States."

Type locality, Point Barrow, Alaska.

The Point Barrow specimens are regarded "as representing a distinct geographic race, probably ranging southeastward over the arctic barren grounds."

Cyanocitta stelleri carbonacea *Grinnell.*

COAST JAY.

Cyanocitta stelleri carbonacea GRINNELL, Condor, II, Nov. 1900, 127.

"*Subsp. char.*— Intermediate in size and coloration between *C. stelleri* and *C. stelleri frontalis*. Dorsal surface sooty-black as in *stelleri*, but with blue on the forehead nearly as extended as in *frontalis*. Tint of blue of posterior lower parts paler than in *stelleri*, and extending further forward into pectoral region, as in *frontalis*."

Type locality, Stevens's Creek Cañon, Santa Clara Co., California.

Range, "Coast region of Oregon and California, from the Columbia River south to Monterey County."

Sturnella magna argutula *Bangs.*

FLORIDA MEADOWLARK.

Sturnella magna argutula BANGS, Proc. N. Engl. Zoöl. Club, I, 20, Feb. 28, 1899.

"*Type*, from Dunedin, Hillsboro Co., Florida.

"*Subspecific characters.* — Size, much less than in true *S. magna*, though the proportions remain about the same; yellow of under parts more intense; upper parts much darker in color, the central areas of feathers being much greater in extent and the light edges much less; tail and wings darker, the barring on middle rectrices, and on secondaries, tertials and wing-coverts, much wider and more pronounced. The general effects produced by these differences are, in *S. magna magna*, a larger bird with paler yellow under parts and a lighter brown back; in *S. magna argutula* a small bird with deeper yellow under parts and a very dark brown back.

"*Size.* — Type, ♂ adult: wing, 113.4; tail, 72.6; tarsus, 41.2; exposed culmen, 35 mm. Topotype, No. 226, ♀ adult: wing 100.2; tail, 68; tarsus, 36; exposed culmen, 28.6 mm."

Geographical Distribution. — *S. magna argutula* reaches "its extreme differentiation in peninsular Florida," but "extends along the Gulf coast to Louisiana, and thence up the Mississippi Valley to Indiana and Illinois."

Leucosticte kadiaka *McGregor.*

Leucosticte kadiaka McGREGOR, Condor, III, Jan. 1901, 8. Separates issued Nov. 25, 1900.

"*Spec. char.* — Similar to *Leucosticte griseonucha* but with smaller bill and smaller, weaker feet and claws."

Type locality, Karluk, Kadiak Island, Alaska. Known only from Kadiak Island.

Melospiza melodia cleonensis *McGregor.*

MENDOCINO SONG SPARROW.

Melospiza melodia cleonensis McGREGOR, Bull. Cooper Orn. Club, I, Sept.–Oct., 1899, 87.

"*Subsp. char.* — Size of *M. m. samuelis* but lighter and more rusty; black markings of back more restricted; spots of breast broadly edged with rusty; black on side of head and neck entirely replaced by rusty reddish brown."

Type locality, Westport, Mendocino Co., California.

Range, "Coast of Mendocino County."

Melospiza sanaka *McGregor.*

Melospiza sanaka McGREGOR, Condor, III, Jan. 1901, 8. Separates issued Nov. 25, 1900.

"*Sp. char.* — Similar to *Melospiza cinerea* but bill longer and more slender, middle toe with claws shorter."

Type locality, Sanak Island, Alaska.

Range, "Sanak and Popoff Islands, Alaska."

Zamelodia melanocephala microrhyncha *Grinnell.*

WESTERN BLACK-HEADED GROSBEAK.

Zamelodia melanocephala microrhyncha GRINNELL, Condor, II, Nov. 1900, 128, figs. 1–4, bill.

"*Subsp. char.* —In both sexes, as compared with *Z. melanocephala* from southern Arizona, bill much smaller and differently proportioned; wings and tail somewhat shorter; ♂ with fore parts, rump, sides and crissum darker brown, almost tawny of Ridgway's Nomenclature of Colors; white tipping of median wing-coverts broader."

Type locality, Buckthorn Çañon, Sierra San Gabriel, Los Angeles, Co., California.

Range, "Pacific Coast region of the United States, including California, Oregon, and Washington."

Pipilo maculatus falcifer *McGregor.*

Pipilo maculatus falcifer MCGREGOR, Condor, II, March, 1900, 43.

"*Subspecific characters.* — Terminal white spot of outer tail feather considerably shorter (less than one inch) than in *megalonyx*; claws much longer and heavier than in *oregonus*; under tail-coverts darker than in *atratus*; rump more or less grayish, upper tail-coverts tipped with pale buff."

Type locality, Palo Alto, California.

Range, "San Francisco Bay region."

Hirundo erythrogastra unalaschkensis (*Gmelin*).

ALASKAN SWALLOW.

Hirundo erythrogastra unalaschkensis W. PALMER, Fur Seals and Fur-Seal Islands of the North Pacific Ocean, Pt. III, 1899, p. 422.

"Similar to *H. erythrogastra*, but larger, with longer wings and tail and relatively smaller bill; white areas of tail larger, with narrow white outer edgings to the feathers."

Seen by Mr. Palmer near the village of St. George on May 28, 1890, and at Black Bluffs, St. Paul, on June 4; nest found at Unalaska on August 13, and three young and a pair of adult birds taken there.

Mr. Palmer adopts the name *unalaschkensis* from Gmelin, Gmelin's name being based on Latham.[1] Latham's description is as follows:

"Length four inches and a half. Bill very short, dusky: the plumage above dull black, without gloss: beneath, and sides of the head, dusky ash-colour, the last darkest: rump dirty white: tail forked: each feather round at the end: legs dusky.

"Inhabits *Aoonalashka*." — *Latham*, General Synopsis of Birds, Vol. II, Pt. ii, 1783, p. 571. Described from a specimen in the Leverian Museum.

According to Sharpe (Mon. Hirundinidæ, Introd., 189 , p. xl) Gmelin's *Hirundo unalaschkensis*, "has not since been identified," and, it hardly need be added, is never likely to be. That it is not a form of *Hirundo erythrogaster* is perfectly evident. Hence if the form proves to be recognizable it will have to be rechristened, Gmelin's name being untenable in this connection

Lanius borealis invictus *Grinnell.*

NORTHWESTERN SHRIKE.

Lanius borealis invictus GRINNELL, Pac. Coast Avif. No. 1, Nov. 1900, 54.

"*Description.* — Lower surface white; foreneck, crissum and lower abdomen immaculate, otherwise distinctly and narrowly barred with vermiculate blackish markings, two such bars being discernible on each feather, upper surface (except irregularly where washed with clay color) French gray merging on rump and scapulars into whitish; superciliary stripe and brow white; lores and upper two thirds of auriculars black, excepting a faint admixture of grayish in middle of lores and next to lower eyelid. Wings and tail blackish, edged with lighter; all the tail feathers white for an inch or more at base; outer web of outer tail feather completely white, and inner web white for terminal 1.50; second feather, 1.05; third, .80; fourth, .35, and remaining two pairs only narrowly tipped with white. White patch on wing formed by white bases of primaries; secondaries tipped with whitish."

Differs from *Lanius borealis* in "larger size, paler coloration dorsally, and greater extent of white markings."

Type locality, Kowak River, Alaska. *Range*, in summer, "Alaska, thus

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[1] *Hirundo unalaschkensis* GMELIN, Syst. Nat. I, 1788, 1025. Based on "Aoonalashka Swallow. *Latham*, syn. II, 2, p. 571, n. 15."

restricting true *borealis* to the eastern portion of North America. In winter *invictus* comes south as far as the northwestern United States." A specimen is recorded from Quincy, California, and another from Lac Qui Parle County, Minnesota.

Parus rufescens barlowi *Grinnell.*

BARLOW'S CHICADEE.

Parus rufescens barlowi GRINNELL, Condor, Nov. 1900, 127.

"*Subsp. char.*— Similar to *P. rufescens neglectus*, but the sides pure smoked gray without a trace of rusty."

Type locality, Stevens's Creek Cañon, Santa Clara Co., California.

Range, "Coast Range of California south from San Francisco Bay to Monterey County."

Chamæa fasciata intermedia *Grinnell.*

INTERMEDIATE WREN-TIT.

Chamæa fasciata intermedia GRINNELL, Condor, II, July, 1900, 86.

Description. — Back and upper tail-coverts sepia, shading into hair brown on nape and top of head. Lores and small spots on upper and lower eyelids pale gray. Throat and breast cinnamon rufous, fading posteriorly into pale vinaceous cinnamon on middle of belly. Feathers on breast with faint dusky shaft-streaks. Sides, flanks and lower tail-coverts brownish olive. Under wing-coverts and axillars pale vinaceous cinnamon. Wings and tail clove brown, the feathers with slightly paler edgings."

Type locality, Palo Alto, Santa Clara Co., California. *Range*, "the San Francisco Bay region."

Intermediate in characters, as in geographical range, between *C. fasciata* and *C. fasciata phæa*.

Merula migratoria achrustera *Batchelder.*

Merula migratoria achrustera BATCHELDER, Proc. N. Engl. Zoöl. Club, I, 104, March 6, 1900.

"*Type*, from Raleigh, North Carolina, ♂ ad., No. 6433, Coll. C. F. Batchelder, taken June 8, 1894, by H. H. and C. S. Brimley.

"*Subspecific characters.*— Size considerably less than in *M. migratoria*. Colors in general much lighter and duller.

"Adult male in breeding season: whole top and sides of head and nape dull black, wing-coverts and rump dull gray, tinged with olive brown

rather than ashy, feathers of the back having hardly ever any trace of the black central markings often shown by *migratoria*. Remiges dark olive brown, lighter and browner than in *migratoria*. Throat white, streaked with black, the streaks fewer, smaller, and less intensely black than in *migratoria*. Breast, sides, axillars, and most of the under wing-coverts light reddish brown of a slightly deeper shade than 'tawny ochraceous' of Ridgway, whereas in *migratoria* these parts range from Ridgway's 'cinnamon-rufous' nearly to his 'burnt sienna.' Feathers of the belly partly of the color of the breast, partly white. Flanks, legs and under tail-coverts white, mixed with gray.

"The differences between the females of the two forms are so closely parallel to those of the males that a description of them is unnecessary."

The measurements given show the southern form to be considerably smaller than the northern.

Geographical range.—"Probably all the Robins breeding in the Carolinas and Georgia, outside of the mountain region of these States, will prove to belong to the new form, while those that pass the summer among the mountains, and in the low country of the adjacent region to the north may be expected to be variously intermediate between it and true *migratoria*."

NEW SUBSPECIES OF NORTH AMERICAN BIRDS.

BY WILFRED H. OSGOOD.

IN identifying birds collected while working in the interests of the Biological Survey, on the coast of British Columbia and Alaska during the past season, comparisons have been made which have led to the discovery of several well marked undescribed subspecies. Several of these which do not come within the scope of special reports now in preparation are here described. For the freedom of the Biological Survey and the National Museum collections, and for generous criticism, I am indebted to Dr. C. Hart Merriam and Mr. Robert Ridgway. For the loan of specimens I thank Mr. Joseph Grinnell and Mr. F. H. Fowler of palo Alto, California.

Lagopus leucurus altipetens,[1] subsp. nov. SOUTHERN WHITE-TAILED PTARMIGAN.

Type from Mt. Blaine, Colorado. No. 69774 U. S. National Museum, ♀ ad. Collected Sept. 3, 1874, by C. E. Aiken.

Characters. — Adult in fall plumage similar to *Lagopus leucurus*, but general color of upperparts buff instead of gray; adult in summer plumage indistinguishable in color from *leucurus*; wings and tail decidedly longer than in *leucurus*.

Color. — Adult male in fall plumage: Upper parts pale cinnamon rufous, back, rump and upper tail-coverts finely dotted and vermiculated with brownish black; head and neck all around somewhat lighter with broader vermiculation and spotting; breast, sides and flanks similar to back but darker; occasional feathers of breast with broad bars or median areas of white; middle of abdomen, under tail-coverts, tail and wings pure white.

Measurements. — The southern bird is considerably the larger as will be seen by the following table. Measurements are in millimeters.

		Locality.	Wing.	Tail.	Bill from nostril.	Tarsus.
Lagopus leucurus .	♀	Cook Inlet, Alaska .	162	103	10	30
" "	♀	Glacier Bay, " .	165	102	9	31
" "	♀	White Pass, " .	166	97	9	29
" "	?	Nahanna Mts., N. W. T.	167	104		31
" "		[2]Rocky Mts., lat. 54° N.	172	102		31
Lagopus l. altipetens	♀	Mt. Audubon, Colo. .	184	114	10	31
" "	♀	Mt. Blaine, " .	188	119	9.5	29
" "	♂	" " .	182	120	9.5	31
" "	♂	Bald Mt. " .	189	115	9	30
" "	♂	San Juan Mts. " .	180	110	9	33

Remarks. — Until the present year the northern White-tailed Ptarmigan has been represented in the National Museum collection only by specimens in summer plumage or in white winter plumage. During the past season, however, I secured an adult female in fall plumage in the mountains on the south side of Turnagain Arm, Cook Inlet, Alaska. Before skinning this bird, it was evident to me that it was different from any ptarmigan that I had ever seen before. Consequently it was one of the first birds

[1] Altipetens = seeking the heights.

[2] These are the measurements of Swainson's type expressed in millimeters.

which I sought to identify on my return from the field. On comparing it with fall specimens from the mountains of Colorado it was immediately seen to be a dusky grayish bird tinged with olivaceous and therefore very markedly different from the cinnamon rufous Colorado bird. It is also much smaller than the Colorado bird and agrees in this respect with three other northern specimens from White Pass, and Glacier Bay, Alaska, and Nahanna Mountains, N. W. T., respectively.

The name *leucurus* seems to be applicable to this small northern form. The measurements given by Swainson indicate the smaller bird and one of the specimens which he describes is said to be "in the act of assuming its winter dress" and to have "the base of the whole upper plumage blackish grey" which exactly describes the Cook Inlet bird above referred to and could not possibly apply to any of the Colorado birds. In summer plumage the two forms are distinguishable only by size.

Anorthura hiemalis helleri, subsp. nov. KADIAK WINTER WREN.

Type from English Bay, near Kadiak, Kadiak Island, Alaska. No. 167276 U. S. Nat. Mus., Biological Survey Collection, ♂ ad. Collected Oct. 3, 1900, by W. H. Osgood and E. Heller. Orig. No. 538.

Characters. — Slightly larger and paler colored than *Anorthura hiemalis pacifica*; otherwise similar.

Distribution. — At present known only from the type locality.

Color. — Adult male in fall plumage: Upperparts paler than in *A. h. pacifica*, general effect cinnamon brown, lightest on head, neck and interscapulars, deepening somewhat on back and rump; upper tail-coverts and rump faintly barred with dusky; scapulars spotted indistinctly with whitish and faintly barred with dusky; outer web of secondaries and inner primaries brighter than back, distinctly barred with black, outer webs of outer primaries isabella color broadly barred with black; median and greater wing-coverts with pale subterminal spots. Underparts between cinnamon and isabella color, palest on middle of breast and abdomen; flanks, abdomen and crissum barred with brownish black and dull white; tail like edge of secondaries.

Measurements. — Type of *A. h. pacifica*: Wing, 45; tail, 29; exposed culmen, 11.5; tarsus, 16. Average of 4 adults from Seattle, Wash.: Wing, 46; tail, 33; exposed culmen, 11.5; tarsus, 17. Average of 3 adults of *A. h. helleri* from Kadiak: Wing, 48.5; tail, 36; culmen, 12; tarsus, 17.5.

Remarks.— The Kadiak Winter Wren is merely another illustration of the tendency of west coast birds which range as far north as Kadiak to become pale in their northern habitat. The present form tends in slight degree toward *Anorthura alascensis*, but not sufficiently to affect its specific rank. Specimens from the Alaska Peninsula would be of great interest but the gap between *helleri* and *alascensis* is too great to make the existence of intergradation probable. The type of *pacifica* from Simiahmoo, Washington, is in winter plumage and thus quite comparable with fall birds from Kadiak. Its upper parts are almost clear burnt umber, very different from the Kadiak birds which are cinnamon brown with a pale filmy wash over it producing an effect somewhat between the cinnamon and broccoli brown of Ridgway. Five specimens of *helleri* have been examined, three taken in August and two in October. An immature bird from Kadiak is indistinguishable from the same plumage of *pacifica*.

The Kadiak wren is named in honor of Mr. Edmund Heller, my field assistant, to whom much of the success of the past season's work is due.

Certhia familiaris zelotes,[1] subsp. nov. SIERRA CREEPER.

Type from Battle Creek, Tehama Co., California. No. 170708 U. S. Nat. Museum, ♀ ad. Collected Oct. 23, 1898, by R. C. McGregor.

Distribution.— Southern Cascade Mountains of Oregon and Sierra Nevada of California.

Characters.— Similar to *Certhia f. occidentalis* but colors more dusky and less rufescent; rump decidedly contrasted with rest of upper parts; similar to *Certhia f. montana* but much darker; light centers of feathers on head and back much reduced.

Color.— Top of head and back clove brown or between clove brown and sepia, streaked with creamy white; rump and upper tail-coverts between chestnut and hazel of Ridgway (in *montana* the color is cinnamon rufous); wings more nearly black than in any other form, spotted with creamy white; throat nearly pure white; breast slightly creamy; sides, flanks, and crissum lightly washed with fulvous.

Measurements.— A series of measurements of all the specimens available indicates that of the three western forms *occidentalis* is slightly the largest with no appreciable difference between *montana* and *zelotes*.

[1] Zelotes = an imitator.

Remarks.— This subspecies has generally been included under the name *occidentalis* but it seems to be more similar to *montana* and its characters might be considered intermediate between those of these two. They are perfectly constant throughout its range, however, so that the form is easily recognizable. The three western forms may be diagnosed as follows:

C. f. montana.— General colors grayish, light centers of feathers of back and top of head broad and conspicuous; rump in contrast with back. *Distribution.* Rocky Mountains from New Mexico north to Alaska.

C. f. zelotes.— General colors dusky; light centers of feathers of back and top of head much reduced; rump in contrast with back. *Distribution.* Cascade Mts. of Oregon and Sierra Nevada of California.

C. f. occidentalis.— General colors rufescent; rump blending with back. *Distribution.* Pacific Coast from Sitka, Alaska, to Marin County, California.

Hylocichla aonalaschkæ verecunda,[1] subsp. nov. COAST HERMIT THRUSH.

Type from Cumshewa Inlet, Moresby Island, Queen Charlotte Islands, British Columbia. No. 166901, U. S. National Museum, Biological Survey Collection. ♀ ad. Collected June 22, 1900, by W. H. Osgood and E. Heller. Orig. No. 429.

Distribution.— Islands and coast of British Columbia and southeastern Alaska; south in winter to California.

Characters.— Similar to *Hylocichla aonalaschkæ* but darker and richer colored; essentially a brownish bird rather than a grayish olivaceous one.

Color.— Type in breeding plumage: Nape and back brownish olivaceous somewhat between the raw umber and broccoli brown of Ridgway; forehead, top of head and rump slightly browner than back; upper tail-coverts and tail Mars brown to burnt umber; throat and breast spotted and streaked as in *H. aonalaschkæ*, but with ground color very much more buffy; sides and flanks grayish olivaceous.

Measurements.— Average of 4 adult females from Queen Charlotte Islands, B. C., and Sitka, Alaska: Wing, 82; tail, 70; culmen, 13; tarsus, 28. Average of 4 adult females of *H. aonalaschkæ* from Kadiak, Alaska: Wing, 84; tail, 72; culmen, 13; tarsus, 28.

Remarks.— Although the Hermit Thrush has not been found by recent collectors on the island of Unalaska and although

[1] Verecunda = shy, modest, retiring.

the absence of the alder brush[1] makes it improbable that it ever has been or ever will be found there, it seems necessary to use the name *aonalaschkæ* for the Hermit Thrush which breeds nearest to Unalaska. An exactly parallel case is found in *Passerella iliaca unalaschensis* which has been restricted in the same manner.[2] Birds from Nushagak and Kukak Bay on the Alaska Peninsula may therefore be taken as typical examples of *H. aonalaschkæ*. These do not seem to differ from numerous specimens from Kadiak but they are decidedly paler and grayer than those from Sitka and the Queen Charlotte Islands. It is therefore necessary to name the southern form, which corresponds in character and in geographic distribution to such subspecies as *Passerella iliaca townsendi*, and *Junco hyemalis oregonus*. Specimens from the vicinity of Lynn Canal and Yakutat are somewhat intermediate though nearer to *aonalaschkæ*. Both *aonalaschkæ* and *verecunda* are found in California in winter and they differ at this season in practically the same way and to the same degree that they do in summer. Winter specimens of both forms from the same locality (Fort Klamath, Oregon) are in the National Museum collection and both are represented at least as far south as San Bernardino, California.

The name *Turdus nanus* which was proposed by Audubon in 1839 has been applied to the western Hermit Thrushes, but a careful examination of the facts connected with this name seems to prove that it should be used for the eastern bird. The most conclusive proof is the original plate (No. 419, fig. 1) which though imprinted *Turdus minor* is cited under *Turdus nanus*. It shows a bird with brown sides which is absolutely diagnostic of the eastern bird. The text also indicates that the original material was practically all eastern. In order to understand the case thoroughly it may be best to quote from Audubon. Prefacing the proposal of the name *nanus* he says:[3] "It is ex-

[1] It is possible that alders may be found on some remote parts of the island, in which case the occurrence of both *Hylocichla* and *Passerella* would be probable.

[2] Cf. Ridgway, Auk, XVII, 30, Jan., 1900.

[3] Orn. Biog., V, 204, 1839.

tremely rare in our Atlantic districts, where, however, I have procured a few individuals. Indeed, the first intimation which I received respecting it was from my friend Dr. Charles Pickering of Philadelphia, who, having procured one had kept its wings and head, the smallness of which, struck me at once. I was then far from imagining that its native haunts were the valleys of the Columbia River, from which, however, I have since received it through the kindness of my friend Dr. Townsend, who has also sent me its measurements, 'length 6 inches, alar extent 9.'"

From this it seems that Audubon's material consisted of several eastern specimens procured by himself, one eastern specimen from Dr. Pickering of Philadelphia and one western specimen from Dr. Townsend, the eastern material thus being in excess of the western. The description of *nanus* except the measurements, is almost a verbatim reprint of that given under *Turdus minor*[1] no difference of color whatever being claimed. In the measurements given under *nanus* the extent of the wings is stated to be 9½ inches, so the specimen measured in this connection could not have been the Columbia River specimen which was alluded to previously as measuring but 9 inches in 'alar extent.' If we then eliminate the Columbia River specimen there remain only the eastern ones for the basis of the name.

Therefore it seems that Audubon's description of *T. nanus* was entirely based on exceptionally small specimens of the eastern Hermit Thrush and since this name antedates *Turdus pallasii* Cabanis,[2] the proper name for the eastern Hermit Thrush is *Hylocichla aonalaschkæ nanus* (Aud.).[3] If additional evidence should show the name *nanus* applicable to the western form, which seems improbable, then it would stand for the bird here described as *verecunda*.

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[1] Orn. Biog., Vol. I, 304-305, 1831.

[2] Wiegm. Archiv., 1847, I, 205, 1847.

[3] The combination *Turdus unalascæ nanus* was used by Coues in 1883, Avifauna Columbiana, p. 34.

THE TWO RACES OF *SAXICOLA ŒNANTHE.*

BY LEONHARD STEJNEGER.

WHEN preparing my paper 'On the Wheatears (*Saxicola*) occurring in North America' (Proc. U. S. Nat. Mus., XXIII, No. 1220, p. 473–481) in which I have demonstrated the existence in this hemisphere of two forms, viz., *Saxicola œnanthe* in Alaska and *Saxicola œnanthe leucorhoa* in Greenland, I wrote to my friend Dr. R. Bowdler Sharpe for the wing measurement of certain African specimens in the British Museum. The answer came too late to be incorporated in the paper quoted, but the facts contained in it are so interesting that I take this means of publishing them and thus further strengthen the claims of the two races for recognition.

The measurements kindly sent by Dr. Sharpe, for which I hereby extend my cordial thanks, are as follows:

Saxicola œnanthe.

1 ♂ Ashi Kisa, Interior of British East Africa. Lord Delamere coll.	Wing 94 mm.
6 ♂♂ Ashi Kisa, Interior of British East Africa. Lord Delamere coll.	" 97-99 "
1 ♀ Ashi Kisa, Interior of British East Africa. Lord Delamere coll.	" 94 "
5 ♂♂ British East Africa, F. J. Jackson coll.	" 95–97 "
2 ♀♀ British East Africa, F. J. Jackson coll.	" 90–97 "
Total 16 specimens from East Africa	" 90–99 "
Average	" 94.5 "

Saxicola œnanthe leucorhoa.

1 ad. Gambia, West Africa	Wing 104. mm.

These figures, it will be seen, fully substantiate my contention that there are two races, one with the wing normally not exceeding 100 mm., and one with the wing normally not shorter than 100 mm., and that the latter is confined to the extreme west of Europe

and Africa migrating in summer to Greenland and adjacent countries to breed. In the paper quoted I stated "that out of a total of 122 typical *Saxicola œnanthe* only 5 have the wing 100 or 101 mm., while of 45 *Saxicola leucorhoa* none measure less than 100 mm. In other words, only 4 per cent of the small race exceed 99 mm., while none of the larger are below 100. In the whole series of 165 birds, consequently, only 3 per cent of the specimens are intermediate." This statement can now be modified to the effect that of a total of 138 typical *S. œnanthe* only 3.6 per cent of the small race exceed 99 mm., while of 46 specimens of the larger race none are below 100 mm., and that consequently out of the whole series of 182 birds only 2.75 per cent are intermediate.

It is also interesting to note that the average of the extremes of Dr. Sharpe's measurements of the small race, viz., 94.5 mm., is identical with the average of the 65 specimens measured by me as shown in the diagram (*op. cit.*, p. 481) and that the West African specimen of the larger race is identical with the average of 28 specimens as shown in the same diagram. There is consequently every reason to conclude that the results deducible from the diagram in question are founded in Nature.

It is then pretty safe to say, that the short-winged *Saxicola œnanthe* in Alaska goes to India in winter, and that the long-winged *S. œnanthe leucorhoa* from Greenland winters in West Africa.

THE LONG-TAILED JAY.

BY JOSEPH GRINNELL.

Aphelocoma californica immanis, new subspecies.

Subsp. Char. — In coloration similar to *Aphelocoma californica*, but size greater and tail proportionately much longer.

Type. — ♂ ad., No. 4582, coll. J. G.; Scio, Oregon, January 9, 1901; collected by A. G. Prill and procured for me by B. J. Bretherton.

Habitat. — Willamette Valley, Oregon (Scio and Salem).

MEASUREMENTS[1] OF SPECIMENS.

No., Coll. J. G.	Sex.	Date.	Locality.	Wing.	Tail.	Tarsus.	Culm.	Bill from Nostril.	Depth of Bill.
4585	♂	March 30, '00	Scio, Oregon	127	151	44	27	20	10.5
4582	♂	Jan. 9, '01	" "	133	165	44	28	21.5	10
4586	♀	Feb. 8, '01	" "	125	152	42	28	20.5	10
4583	♀	March 3, '00	" "	129	150	41	27	21	10

[1] In millimeters.

GENERAL NOTES.

Brünnich's Murre in Lewis and Jefferson Counties, New York.— On Nov. 29, 1900, I had an adult male specimen of *Uria lomvia* brought to me by a farmer who stated he caught him alive in a mud hole near his home. This is, I believe, the first instance of the capture of this species in Lewis County.

A few days later, Dec. 4, I received another from a gunner at Redwood, Jefferson County, who stated there was quite a large flock of them on the lake at that place. This specimen had eight small black bass in its stomach, the largest three inches long.— JAMES H. MILLER, *Lowville, Lewis Co., N. Y.*

Habits of the Gooney. — My attention has been called to recent notes by Messrs. Henshaw and Mead on the habits of a Pacific species of Albatross, or Gooney, as the species of *Diomedea* are almost universally called by sailors in the North Pacific.

As to whether the species roost on the yards of vessels or spend the night resting on the water, I can say that I have never known an Albatross to attempt to alight on the spars of a ship, and I very much doubt their so doing although Gulls and Boobies often rest for hours on the yards or in the shrouds. I have often beguiled the weary hours of a 'trick' on deck at night, by watching the albatrosses as they tacked to and fro in the wake of the vessel. When there was sufficient moonlight I have seen them pass and light near the course of the vessel, and then, after having dropped astern some distance, they would come straggling along to pass and alight as before. Even on the darkest nights they may sometimes be seen against the sky as they follow in the wake of vessels, and it is my opinion that they follow until they feel the need of rest, probably several days, and make no attempt to find a vessel that has passed beyond the limits of their horizon.

Gulls also will, at times, follow the same vessel for several days if the course taken is near the coast, but they soon drop the deep sea craft. I once noted a *Larus glaucescens* with distinctive markings which followed the coast steamer from San Diego to San Francisco for nearly three days.— A. W. ANTHONY, *Portland, Oregon.*

Audubon's Shearwater (*Puffinus auduboni*) **on the Coast of Virginia.**— A Shearwater from Cobb's Island, sent me several years ago by Capt. C. H. Crumb, taken, according to the label, on September 1, 1893, proves to be of this species.

For the following additional particulars regarding these Shearwaters, I am indebted to Mr. William Palmer. Mr. Palmer informs me that during his return voyage from Havana, last August, on the way north to Cape Hatteras, great numbers of them were to be seen for about a day and a half. Early in October, Mr. Palmer again saw several at Virginia Beach, Va. It seems possible that this bird may occur not infrequently off the Virginia coast. — WILLIAM C. RIVES, M. D., *Washington, D. C.*

The Mexican Cormorant in Colorado.— A specimen of this species (*Phalacrocorax mexicanus*), an adult male, was taken Oct. 15, 1899, at Smith's Lake, fourteen miles north of Denver, Colorado.— A. H. FELGER, *Denver, Colorado.*

A Virginia Record for the American Eider (*Somateria dresseri*).— On Dec. 28, 1900, a female American Eider (*Somateria dresseri*) was taken on Broadwater Bay, near Cobb's Island, Virginia. So far as I am able to learn this bird has not been previously recorded south of the Capes of Delaware.— HENRY BRYANT BIGELOW, *Cohasset, Mass.*

Early Occurrence of the Black Scoter in Maryland and Virginia. — On Aug. 26, 1900, I came across a male and four females of the Black Scoter just inside the surf at Gargathy Inlet, Accomac County, Virginia. They were quite tame and allowed of close approach. On being flushed they flew outside the breakers and pitched. On Aug. 29 I reached Ocean City, Maryland, and saw 20 in a bunch just outside the surf. Capt. Christopher Ludlam, a most careful observer, told me that he had first observed them at this point on Aug. 27, when a bunch of about 100 were just outside the surf. On Aug. 30 I saw a bunch of about 20, and possibly the same bunch of about 20 on the 31st. These were carefully observed through a strong field glass, so the identity is assured. — F. O. KIRKWOOD, *Baltimore, Md.*

The Purple Gallinule in Massachusetts in the Breeding Season. — In August, 1899, I saw at the farm of Mr. A. J. Severance in Rowley, Mass., a mounted specimen of the Purple Gallinule (*Ionornis martinica*). The bird was caught in June, 1897, by a cat at a pond in the adjoining town of Boxford. Another bird, supposed to be of the same species and the mate, was seen at the pond. This appears to be the second record of the occurrence of *Ionornis martinica* in Essex county, the specimen previously noted being preserved in the collection of the Peabody Academy of Science at Salem.

Another hitherto unpublished record of *Ionornis martinica* in Massachusetts is that of a beautiful specimen which I saw in the flesh in April, 1890, at the stall of W. W. Palmer, Faneuil Hall Market, Boston. The bird had been caught in a muskrat trap at Chatham. — J. A. FARLEY, *Malden, Mass.*

Occurrence of Baird's Sandpiper in Sussex, England. — An immature female of *Heteropygia bairdi* (Coues) was shot by Mr. Michael J. Nicoll, on the shingle to the west of Rye Harbor, on the 11th of November, 1900. The bird was seen in the flesh by the present writer on the day following, and upon examination it soon became obvious that it was a stranger. Upon being submitted to Mr. Ernst Hartet, the accomplished ornithologist of Tring Museum, it was pronounced to belong to the above species. Baird's Sandpiper is not known to have previously occurred in the British Islands. The specimen was exhibited by Mr. Hartet at a meeting of the British Ornithologists' Club, on 21st Nov., 1900. (Bull. B. O. C., Vol. XI,, p. 27).

It may be added that Mr. Nicoll's curiosity was aroused by the strange cry and flight of the bird. He states that when approached it flew some distance, and then, after rising, it suddenly dropped to the ground.— W. RUSKIN BUTTERFIELD, 4, *Stanhope Place, St. Leonard's-on-Sea, England.*

Ruffed Grouse in Snow.— From records in the snow I have come to the possibly trite conclusion that the Ruffed Grouse (*Bonasa umbellus*),

when not scared from the ground, will often deliberately clamber to some stump, or other eminence, in order to get good wing-space below its body for the first stroke in flight. The awkwardness of a leap from the level I found beautifully illustrated upon a flat piece of fresh soft snow some three inches in depth. Here, at the bird's spring, its entire form from tip of tail just to the swell of the throat, and from tip to tip of both wings, had pressed a mould some inch or two deep. This mould measured eighteen inches long and twenty inches in spread. Even the primaries of both wings were perfectly distinct, struck hard and clean. At a distance of eleven inches in front of this wing-beat the primaries had again struck into the snow, an inch in depth, as the wings met below the bird's body on the second stroke. The tips of these marks at their deepest were, I think, about four inches apart, showing that the bird normally needs an air-space below the body of almost the wing's full length. On firm ground the legs might push to this height; but on soft snow this manner of departure could hardly have been premeditated. These observations were made at Beverly Farms, Mass.— REGINALD C. ROBBINS, *Boston, Mass.*

The Passenger Pigeon.— Since the year 1871 I had not seen a Wild Pigeon until 1896, when, near the Bay of Quinte, I saw a pair. The following year in the same vicinity, I saw from four to six birds on several occasions and during the next two years I saw about the same number. The past season I had not the opportunity of observation.

In 1898 I wrote in 'The Globe,' the leading daily paper of Canada, asking any one who had seen Wild Pigeons, during recent years, to make it known. This elicited many replies through 'The Globe' and by personal letters.

There was a general agreement as to a total disappearance about 1870, continuing until 1895. A few stated they had seen an occasional bird earlier. The reports were from all parts of Ontario and Manitoba. Mr. D. C. Black, Appin, Ont., writes: "I saw nine in a wheat field near the village of Glencoe, and they are the first I have seen in twenty-five years. They did put me in mind of the olden times. When I was a boy I used to spend a great deal of my time trying to strike them with sticks. They have often taken half a day, crossing over our farm, flying very low, as they seemed to be very tired .... To see a few of them is to me as seeing a dear old friend."

I think we may fairly conclude that the Wild Pigeon abruptly became very rare about 1870 (it is probable there was a diminution during the previous decade), and that there has been an increase in their number in recent years.

I am not aware of any satisfactory explanation of the phenomena. It is not improbable, some epidemic disease, spreading more rapidly on account of the immense number of individuals, nearly exterminated the

species. In such a case, we might expect to see them again, in large numbers. This would be analogous to what we see in insects, *Danais archippus* for instance.

The food supply has certainly become less. In this connection it is interesting to observe, that in the district where I have seen Wild Pigeons recently, there are some white oak trees and though they are mostly second growth, they succeed quite a forest of old oaks. There has, in this locality probably, been a continuous supply of mast. Mr. S. D. Woodruff of St. Catherines, Ont., writes, that he learned from sea captains that immense numbers of pigeons perished in the Gulf of Mexico, being exhausted by contrary winds and dense fogs. He says the experience of several ship masters was having "myriads of the pigeons alight on the vessel and rigging, and having to cast them off into the sea."— G. C. TREMAINE WARD, *Napance, Ont., Can.*

The Occurrence of the Ground Dove in Virginia.— While on a visit near Lynchburg, Campbell County, I flushed and killed a bird which upon examination proved to be this species (*Columbigallina passerina*). This is, I believe, the first instance of this kind occurring in this State. The bird was shot on November 4, 1900, and was a female in fine condition. It is now in the collection of Bertram Roberts of Washington, D. C.— PERCY W. SHUFELDT, *Washington, D. C.*

Rachitis in Young Red-shouldered Hawks. — May 26, 1900, Mr. A. H. Verrill informed me that he had that morning taken four downy young Red-shouldered Hawks (*Buteo lineatus*) from a nest near New Haven, wishing to raise them for photographic purposes. He fed them on butcher's meat, and they grew in size and weight, and juvenal plumage soon began to show. May 31 one was so weak that it was put to death, and the others seemed out-of-sorts, though gaining in size and plumage. They were unable to lift themselves to their feet, and seemed to suffer pain when handled. Their characteristic attitude was with the feet thrust forward. These symptoms increased and on June 11 two died.

In preparing them for specimens I found they showed well-marked evidence of rickets. Subcutaneous fat was present in large amounts, but the muscles were flabby and anæmic and the ligaments lax. The epiphysial cartilage was somewhat enlarged, the long bones deformed and unusually soft and flexible, and the tibiæ of both birds showed subperiosteal fractures at the point where the weight of the body would come when seated. Doubtless their attempts at standing aided in causing these fractures.

As Mr. Verrill and I were at this time collecting in western Connecticut, I suggested giving the surviving hawk bird-bodies as a change in diet, thinking that possibly these young birds had been unable to assimilate the lime necessary for calcification of the bones from meat alone. Under this treatment the surviving bird improved somewhat, but died on June 15, showing on dissection a condition similar to the others.

As a young Red-shouldered Hawk, which some years ago I fed on meat, died showing similar symptoms, and later nine young Ferruginous Rough-legs flourished on a diet of bird and mammal bodies, it seems probable that these birds require bone in their food to attain healthy growth, especially as it is known that young mammals will die of rickets if fed from birth on meat alone. — LOUIS B. BISHOP, M. D., *New Haven, Conn.*

New Name for Nyctala.— The generic name of Richardson's and the Saw-whet Owls, *Nyctala* Brehm, 1828, is preoccupied by *Nyctalus* Bowdish, 1825, for a genus of mammals, and as no other term appears to be available I will propose *Cryptoglaux* (κρυπτος, hidden, and γλαύξ, an owl), with *Strix tengmalmi* Gmelin as the type. The species in our list will thus stand as *Cryptoglaux tengmalmi richardsoni* (Bonap.), and *Cryptoglaux acadica* (Gmelin). — CHARLES W. RICHMOND, *U. S. National Museum, Washington, D. C.*

The Pileated Woodpecker in Connecticut.— Late last December, Mr. Charles S. Starr, a recent graduate of Yale, saw in Cornwall, western Connecticut, what was undoubtedly a Pileated Woodpecker. He describes it as a large black bird nearly the size of a Crow, with a crimson patch on the back of its head, and some white markings, also having a very long bill. It was clinging to the trunk of a dead tree, pecking, and climbing up spirally. It moved by short hops, and was slow and irregular in flight. I think he has described the species very satisfactorily. Its occurrence in this State is now, I think, very uncommon.—HERBERT K. JOB, *Kent, Conn.*

Milvulus versus Muscivora. — The generic name *Muscivora* has commonly been applied to that group of Neotropical flycatchers of which *Todus regius* Gmelin is the type and earliest described species. A careful investigation, however, shows that the name *Muscivora* was originally employed by Lacépède (Discours du Cours d'Hist. Nat., 1799, p. 5) for the "Mouche-rolles" of Buffon, which include several species of Old and New World flycatchers, among them *Tchitrea paradisi*, *Tchitrea mutata*, *Milvulus tyrannus* and *Milvulus forficatus*, but not *Muscivora regia*, this last having been placed by Buffon among the "Gobe Mouches," the group Lacépède (*loc. cit.*) calls *Muscicapa*. *Todus regius* (=*Muscivora regia* auct.) can, therefore, in no case be considered the type of *Muscivora*. What that type is was first determined by Fischer, who, in 1813 (Zoognosia, I, p. 54), selected *Muscicapa forficata* (=*Milvulus forficatus* auct.). Since *Milvulus* Swainson (Zool. Journ., III, 1827, p. 165) is thus antedated by *Muscivora* it must of course give place.

The next available generic name for *Todus regius* and its allies is *Onychorhynchus* Fischer (Zoognosia, I, 1813, pp. 31, 42), type by implication *T. regius*. The species of these two genera will therefore now stand as follows:

Muscivora forficata (Gmelin).
Muscivora tyrannus (Linnæus).
Onychorhynchus regius (Gmelin).
Onychorhynchus swainsoni (Pelzeln).
Onychorhynchus mexicanus (Sclater).
Onychorhynchus occidentalis (Sclater).

—HARRY C. OBERHOLSER, *Washington, D. C.*

Variation in Size in the Wood Pewee.— The Wood Pewee (*Horizopus virens*) throughout the whole breadth of its breeding range, from Florida to Newfoundland, shows a nice gradation in size from *large* examples in the south, to *small* examples in the north. This fact seems worthy of comment as the northern examples of a species are generally characterized by being larger. The greater size of the southern bird has heretofore been commented upon by Mr. C. J. Maynard (*in verbis*). The birds from the north average, *Males.*: Wing, 3.30—; tarsus, .52; bill (from nostril to tip), .38—; width of bill (at nostrils), .26+. Extremes: Wing, 3.18 to 3.42; tarsus, .46 to .54; bill, .30 to .43; bill (wd.), .25 to. 29. *Females*: Wing, 3.15; tarsus, .49+; bill, .38+; bill (wd.), 25+. Extremes: Wing, 3.11 to 3.18; tarsus, .45 to .53; bill, .36—to .40; bill (wd.), .24 to .27. Those from the South (arbitrary dividing line, Lat. 42°), *Males*: Wing, 3.41+; tarsus, .53+; bill, .40—; bill (wd.), .28+. Extremes: Wing, 3.30 to 3.55; tarsus, .51 to 57; bill, .39 to .43; bill (wd.), .27 to .32. *Females*: Wing, 3.17+; tarsus, .52+; bill, .38+; bill (wd.), .27+. Extremes: Wing, 3.08 to 3.45; tarsus, .50 to .58; bill, .37 to .40; bill (wd.), .25 to .29. These measurements were taken from a series of thirty-two specimens.

It is also interesting to note that both the figures by Catesby and Abbot (Auk, XIII, p. 104), show the pronounced hook and larger size of the southern bird's bill. For the use of specimens my thanks are due to Drs. Walter Faxon and C. W. Richmond, Messrs. Witmer Stone, William Brewster, H. B. Bigelow, and others.— REGINALD HEBER HOWE, JR., *Longwood, Mass.*

The Meadowlark (*Sturnella magna*) at Rangeley, Maine.— Although the Meadowlark has been found at several localities in northern New England the capture of a male at Rangeley, Maine, April 21, 1897, by Mr. Ernest L. Haley, is perhaps worth recording. The specimen, which is in high spring plumage, has been recently purchased for me by Mr. M. Abbott Frazar, to whom I am also indebted for the above data.— WILLIAM BREWSTER, *Cambridge, Mass.*

The European Starling in Connecticut.— December 3, 1900, I took a male Starling (*Sturnus vulgaris*) in North Haven, Conn. The bird was alone late in the afternoon, and flew from up the river into some trees near the edge of the Quinnipiack Marshes. I judged from its actions that it was looking for the blackbirds which every autumn roost in large numbers in the rushes near where it was shot, and with which it may have

associated before they left for the South. Mr. W. H. Hoyt tells me that three Starlings have been taken recently from a flock that is spending the winter on Noroton Hill, near Stamford. — LOUIS B. BISHOP, M. D., *New Haven, Conn.*

Snow Bunting at Sea.— About noon on November 17, 1900, a Snow Bunting (*Plectrophenax nivalis*) was observed at sea by Mr. Paul du Chaillu and myself, on board the American line steamer 'New York.' The bird approached from a southwesterly direction and alighted in the rigging, flying in a rather labored manner. The vessel was then 260 miles east of Sandy Hook and 50 miles distant from the eastern end of Nantucket, the nearest land. The weather was fair.— HUGH M. SMITH, M. D., *Washington, D. C.*

Montana Redpolls.—A small series of Redpolls collected by Mr. Charles T. Hodges at Miles City and Fort Keogh, Montana, during the winter of 1899–1900 has come recently into my possession. The majority are specimens of *Acanthis linaria*, but there are three skins of *A. l. rostrata*, two of *A. l. holbœllii*, and two of *A. hornemannii exilipes*.

The Greater Redpoll was taken on March 1 and 6, the Holbœll's (which Prof. Ridgway has examined) on March 2, and the Hoary, on February 26 and March 12. I can find previous records for only *Acanthis linaria* from Montana.— LOUIS B. BISHOP, M. D., *New Haven, Conn.*

Acanthis linaria rostrata and Xanthocephalus xanthocephalus in Connecticut. — In a small collection of bird skins given me some time ago by Dr. W. H. Hotchkiss of this city I find two skins of the Greater Redpoll. They were taken by Dr. Hotchkiss near New Haven on December 17, 1878, and are, I believe, the only specimens of this subspecies so far recorded from Connecticut.

In the same collection was an unlabelled skin of a female Yellow-headed Blackbird, which Dr. Hotchkiss told me he was certain was shot near New Haven in June, 1878. In this connection it may be well to report that another female of this species was taken on Monomoy Island, Mass., September 8, 1897, by Mr. W. B. Revere, and given to me while in the flesh.— LOUIS B. BISHOP, M. D., *New Haven, Conn.*

Deformity of Maxilla in the House Sparrow. — The accompanying illustrations show the overgrowth of maxilla after loss of mandible in a male *Passer domesticus*. The photograph was taken by Mr. A. H. Verrill, who shot the bird in his yard in New Haven, December 10, 1900, and brought it to me in the flesh.

The culmen measures .60 inch from nostril against an average of .39 inch in five normal males of this species. The maxilla measures .16 inch in depth at tip on the right side, but had been worn off on the left where all that was left of the mandible approached it. The normal outer cov-

ering of the bill persists at the base in the form of a triangle, the apex extending .31 inch along the culmen; this portion thus showing much the shape of a normal maxilla. On the rest this outer layer has disappeared, doubtless from effort of the bird to scoop up food. Mr. Verrill said he saw it attempt to pick up pieces of cracker in this manner.

Of the mandible only a fragment .28 inch long (measured from the commissural angle) at the base of the left ramus is present, the rest having

been lost through some accident. The wound had healed, leaving the tongue exposed. Most of the feathers on the upper throat and malar region have been worn away, and the plumage in general was dirty, rumpled and matted, as the bird was of course unable to preen. The body was emaciated, but there was a little subcutaneous fat, and a partial molt was in progress. The stomach contained a little white sand, and a soft, whitish substance, probably cracker.

That this bird in its crippled condition after the loss of the mandible succeeded in living the time necessary for the great overgrowth of the maxilla seems to me very remarkable. Mr. W. H. Hoyt of Stamford has shown me a mounted Parrot (*Amazona leucocephala*) in which the mandible had grown over the maxilla and extends for more than one third of an inch upwards, but this bird lived in captivity. — Louis B. Bishop, *M. D., New Haven, Conn.*

The Loggerhead Shrike in New Brunswick.— On different occasions broods of young shrikes have been seen near here, and the writer always supposed they were the Northern Shrike (*Lanius borealis*), as that was the only species of shrike in Chamberlain's list of New Brunswick Birds. But two years ago on writing to Mr. F. M. Chapman of their occurrence, he suggested that they were *Lanius ludovicianus*. Since that date no young have been observed, but during the past summer, at two different times, shrikes were seen that, I was most certain, were the Loggerhead,

but having no gun I was unable to obtain a specimen for close inspection. On the 15th of January while calling on a taxidermist friend, I saw what was without a doubt a Loggerhead Shrike, that had been taken near here, yet he did not know it to be anything uncommon, as he is very poorly informed in ornithology. This is probably a new addition to the birds of New Brunswick, and for which a keen lookout will be kept in future — WM. H. MOORE, *Scotch Lake, York Co., N. B.*

The Scientific Name of the Southern Yellow-throat. — Mr. Chapman's disagreement (Auk, Oct., 1900, p. 389) with my acceptance of *Geothlypis trichas roscoe* (Aud.), brings up an interesting nomenclatural question well worth discussing. I have never seen *trichas* in a cypress tree, but I have seen *roscoe* often. This is not of course evidence that Audubon shot a *roscoe* but neither is Mr. Chapman's idea that the bird was a *trichas* because it was high up in a cypress and the time September. It should be remembered that Audubon knew little about subspecies and nothing about their values, and therefore his action in reversing a former view is not surprising. Also, previous to the publication of Dr. Hasbrouck's paper, and Mr. Brewster's name for the western bird, all were considered as *trichas*. My conclusion on the subject was based on ideas not thought necessary to discuss in a long paper but I will do so now that the issue has been raised.

Hasbrouck definitely and rightly separated the southern bird and would have given a new name but for the existence of the name *Sylvia roscoe*. It seemed reasonable from the evidence before him that Audubon's bird under the circumstances was the southern form. Chapman brought forward no additional evidence concerning the distribution of these birds and has not disproved the early view of Audubon, or Hasbrouck's action. The known eastern distribution of these birds for hundreds of miles beyond the limits set for it by Chapman, and the existence of Gulf specimens referable to the same form, renders Hasbrouck's acceptance of Audubon's name logical and reasonable. It should be, scientifically speaking, necessary that positive evidence should be acquired before upsetting a name so well established as Hasbrouck's, yet Mr. Chapman furnished none in his paper and none since.

There is no taint on Hasbrouck's name; it is not a homonyn, nor is there a particle of evidence to prove or even tending to show, that it is a synonym of *G. trichas trichas*. It is really necessary to dispose logically of the older name by *evidence*, not opinion. I consider that there are three things which should prevent acceptance of Mr. Chapman's name, and that the burden of proof rests with Mr. Chapman, not with the other side. It is necessary to prove that *Sylvia roscoe* is a synonym of *G. trichas trichas*. It is necessary to prove that the southern bird does not exist in the cypress swamps of Mississippi. It is necessary to show that another form occurs in that State that in all probability is Audubon's bird. Until

the certainty of either of these premises is shown, priority and fairness demands that *G. t. roscoe* should stand. I think now, as I thought long ago, that the publication of *G. t. ignota* was unnecessary and should be ignored until proof, not opinion, is produced to set aside the older name. —WILLIAM PALMER, *Washington, D. C.*

The Correct Name for the Florida Yellow-throat.— Accepting Mr. Palmer's line of argument, in the preceding note, as the logical one by which to determine the proper name of the Florida Yellow-throat, I would ask him on what ground he ignores Audubon's statement that the bird he described as *Sylvia roscoe* was a young Maryland Yellow-throat? Audubon was more discriminating than Mr. Palmer evidently believes him to have been and until his identification of *Sylvia roscoe* has been *proved* to be erroneous we are not justified in rejecting his views.

It may be added, that all the facts in the case strongly suggest that Audubon's type was a migrant. Hence, even if it be later discovered that the breeding Yellow-throats of western Mississippi are identical with the resident Florida form, it by no means follows that Audubon's name *roscoe* is applicable to them. In short, we shall be warranted in reversing Audubon's decision only after an examination of his type, and as this probably does not exist, there will doubtless never be a reason for refusing to accept his conclusions.— FRANK M. CHAPMAN, *American Museum of Natural History, New York City.*

Probable Breeding of the Red-bellied Nuthatch near Boston. —I am requested by Mr. F. H. Mosher to report that he saw in June, 1899, in Medford, Mass., a Red-bellied Nuthatch (*Sitta canadensis*) busily engaged in catching and carrying away larvæ, presumably to its young. Mr. Mosher failed, however, to locate the supposed nest, for the Nuthatch, as he was tracing it through the woods, was set upon by a Wood Pewee and driven out of sight.

On other occasions during the summer of 1899, this species was observed in this locality by Mr. Mosher. — J. A. FARLEY, *Malden, Mass.*

The Newfoundland Veery (*Hylocichla fuscescens fuliginosa*) **in Massachusetts.** — On the 27th of last September I shot a specimen of this lately described bird in Lanesboro, Berkshire Co., Mass., — the first example taken in this State. The four autumnal records for New England fall within the narrow limits of five days (Sept. 23–27), and indicate a migration through this region considerably later than the departure of the native Veeries for the South. In 1889 I killed a Veery in Waltham, Mass., on the extraordinarily late date, Oct. 5. This bird was unfortunately not preserved, but without much doubt it belonged to the race *fuliginosa*. — WALTER FAXON, *Museum of Comparative Zoölogy, Cambridge, Mass.*

Notes from Northern New York. — At Chateaugay Lake, Clinton Co., N. Y., on Dec. 24, I saw a typical specimen of *Uria lomvia* which had been shot on the lake just before it was closed by the ice — that is, about Dec. 12 or 13, 1900.

On the 24th also I found the body of a Great Blue Heron (*Ardea herodias*), from which the wings had been cut off, lying on top of the snow on the margin of the lake. As the last heavy snow in that section fell on Dec. 12, 1900, the bird could not have been killed before that date. The plumage was immature. — GEO. C. SHATTUCK, *Boston, Mass.*

Florida Bird Notes. — The greatest migration of birds that I have ever witnessed occurred here during about two hours of the morning of Jan. 31. The movement was composed exclusively of White-bellied Swallows, thousands of which passed headed south; wind fresh S. W., thermometer 80°. This migration was evidently caused by a cold wave in the upper portion of the State.

Ruby-throated Hummingbirds have been with us all winter, also Bonaparte's Gulls. This is the first season I have observed the latter here. — E. J. BROWN, *Lemon City, Florida.*

Notes from the Magdalen Islands. — I had the pleasure the past season, with Mr. C. S. Day, of spending three weeks at the Magdalen Islands. We devoted most of the time to Coffin Island and East Point, as being least known, arriving there on June 12. For four days we were isolated from the world at the wonderful Bird Rocks. The following are a few of the more noteworthy of many observations.

On June 13 Mr. Day was so fortunate as to flush a Least Sandpiper (*Tringa minutilla*) from her nest with four half-incubated eggs. The nest was a mere hollow in the 'barrens,' just back from the edge of a slough, among sparse growth of coarse grass and moss, the structural part consisting of simply a few dry bayberry leaves. The eggs were of a light grayish buff, marked rather sparsely, except at the crown, where there was a thick mass of spots and blotches. The markings were of a rich dark brown, verging on blackish at the crown, with occasional subdued lilac. In size they varied only from 1.18 to 1.20 inches in length, and from .82 to .88 in breadth. The owners were both present, and so exceedingly tame that I photographed one of them upon the nest. The love song is beautiful, a mellow twittering, emitted as the bird circles about. I met the species several times, and it is considered by the fishermen a regular and frequent breeder.

The same is their opinion regarding both the Scaup Ducks. I saw Scaups occasionally, and finally discovered a nest of the Greater Scaup (*Aythya marila nearctica*) with nine eggs, June 29, on a small island in "the Great Pond," flushing the female at very close quarters. The nest was a bed of down in the grass, the eggs fresh and notably larger than the many of the Lesser Scaup I have found in the West, ranging in

length, with one exception, from 2.50 to 2.60 inches, and in breadth from 1.70 to 1.80. In color they were almost exactly like some eggs of the Bittern that I had just taken, with a little more of an olive tinge. None of the books give this species as nesting in eastern North America, so perhaps this is the first known instance. As in the case of the Lesser Scaup, it would appear to be a late breeder. Only a few rods away, on another 'nubble,' were nests and eggs of a belated Dusky Duck, and of a habitually late-breeding Red-breasted Merganser. I also found a nest of the Blue-winged Teal on June 16, the young alive in the shell.

The Bittern, the Horned Grebe and the Rusty Grackle breed abundantly in the swamps and ponds near East Point. Of the first I found one nest with six eggs, the books giving five as the maximum. At the time of our arrival the young Rusty Grackles had just left the nests. These are very similar to nests of the Robin, and are built low down in the spruces, usually near the ends of thick boughs. I found this species only near East Point, in clumps of spruces on wet ground by the ponds. Piping and Ring-necked Plover were breeding abundantly on the long sand-bar between Grand Entry and Grindstone, but were almost wholly absent at East Point.

The stay on Bird Rock was fascinating beyond compare, amid the whirring multitudes of sea-birds. One morning we rowed over to and climbed North Bird, inspecting the Gannet colony on top. For the sake of the cause of bird-protection, I will here say that I was witness to the landing of a party of fishermen on Great Bird, after they had taken everything on North Bird that they could reach or shoot, who fired raking shots again and again into the masses of birds upon their nests, mowing them down like grass, to leave them there dead or dying, — a most horrible and pathetic sight. Will not our committee on bird-protection, the Audubon Society, and individual friends of the birds, use their influence to induce the Canadian authorities to forbid or restrict the looting of the Bird Rocks, and make the keeper of the light a warden?

In all I noted 65 species on the islands, 52 of these, at least, undoubtedly breeding. Curiously, staying mostly about East Point, I failed to find a number of the small land-birds that others have reported, but, as I had hoped, this was counterbalanced by the water-birds. Comparing my list with those of Cory, Brewster, Bishop, and Young, I have three species not recorded by them: — Barn Swallow, Mourning Warbler, and Glaucous Gull. The first of these is now common, and perhaps has come in there quite recently.

Five more species seem to be unrecorded in the breeding-season (June), namely, Bonaparte's Gull, Eider, Lesser Yellow-legs, Saw-whet Owl, and Tree Swallow. Of these last only the Saw-whet was proved to breed, by my finding a dead fledgling in a Flicker's hole. Fishermen declared that the Bonaparte's Gull breeds, but all I saw were in immature plumage.— HERBERT K. JOB, *Kent, Conn.*

New Brunswick Notes. — Lincoln's Sparrow (*Melospiza lincolnii*) was observed near Fredericton, N. B., on August 10, 1900, and a Cardinal Grosbeak (*Cardinalis cardinalis*) at Scotch Lake on August 20, the second occurrence of this species here known to me. Three male Purple Finches (*Carpodacus purpureus*) were observed at Scotch Lake on February 4, 1901, and seven Goldfinches (*Astragalinus tristis*) at the same place on February 15. Our ordinary winter birds have been very scarce. — Wm. H. Moore, *Scotch Lake, York Co., N. B.*

Birds observed during a Steamer Voyage from San Francisco to Victoria, British Columbia. — *September 8, 1898.* Midday; within sight of the surf off Point Reyes, California; clear and calm. Several Western Gulls were near the steamer and a Black-footed Albatross followed in its wake. A small flock of shore birds, apparently Northern Phalaropes, passed by, flying northward instead of southward.

North of Point Reyes, about ten miles offshore. A few Dark-bodied Shearwaters were skimming over the surface. A Pink-footed Shearwater, as it coursed about, came near the ship, and five Black-footed Albatrosses followed astern.

As the afternoon advanced a brisk breeze developed. Black-footed Albatrosses continued in attendance; several Pink-footed Shearwaters were passed by the way.

September 9. Morning; about seven miles off Rogue River, Oregon; sea like glass. Cassin's Auklets were abundant in companies on the water. An Olive-sided Flycatcher and a Mourning Dove alighted on the vessel. Several other doves were seen. Five Black-footed Albatrosses accompanied us. The list of birds was further increased by a company of Western Gulls, two Pelagic Cormorants, a Tufted Puffin, a Loon, and a Dark-bodied Shearwater.

North of Cape Blanco; twenty miles offshore; land hidden from view. An American Pipit and a Red-breasted Nuthatch came aboard; there being no better substitute for a tree the Nuthatch hunted for food on one of the masts. Several Tufted Puffins were sighted and six Black-footed Albatrosses bore us company.

September 10. Morning; near Cape Flattery; smoky from forest fires; the ocean without a ripple. A Sandwich Sparrow and a Yellow Warbler boarded the ship; we passed a small band of Dark-bodied Shearwaters resting on the water.

Between 10 and 11 A.M., a Townsend's Warbler, a Wilson's Warbler, several Yellow Warblers, and an American Pipit sought refuge on the deck.

Strait of Juan de Fuca; 2 P.M.; land hidden by smoke. A Red-shafted Flicker appeared and alighted on the stays supporting the smokestack, completing the list of the birds of the voyage. — Leverett M. Loomis, *California Academy of Sciences, San Francisco.*

Occurrence of Tringa maculata and Other American Birds in Hawaii. — The following brief notes are in line with those published by the writer in 'The Auk' for July, 1900, and tend to show that a greater number of American littoral species find their way annually to the Hawaiian Islands than hitherto has been supposed.

Tringa maculata. PECTORAL SANDPIPER. — Mr. George C. Hewitt shot a specimen of this Sandpiper at Kaalualu on the Kau coast, Oct. 14, 1900. Later in the month he procured a second example in the same locality, kindly sending both specimens in alcohol to the writer for identification. This, I believe, is the first record of the bird in the islands. For the present, at least, we must regard its presence here as accidental.

Charadrius squatarola. BLACK-BELLIED PLOVER. — A specimen of this Plover was shot by Mr. Hewitt late in October near Kaalualu. This is the first recorded instance of the occurrence of the bird in the Hawaiian Islands, though no doubt its casual appearance is to be looked for in flocks of its relative, the Golden Plover.

Calidris arenaria. SANDERLING. — I mention this species merely to note that Mr. Hewitt shot a specimen on the Kau coast in October, and that early in the same month two individuals visited the Hilo Beach and remained there for more than a fortnight where I watched them daily feeding unconcernedly within a few yards of the houses. As I have elsewhere stated, the species is to be regarded as an annual winter visitor, though in small numbers.

Bernicla, sp.?— In October at least two distinct bands of American Geese were seen on a number of occasions near Hilo, and a number were killed, none of which, however, was the writer fortunate enough to see. Probably there were twelve or fourteen individuals altogether. Both *B. nigricans* and *B. minima* are quoted by Wilson (Birds of the Hawaiian Islands, Introduction, p. xxv) from Kauai on the authority of Palmer, Mr. Rothschild's collector. In time no doubt all the species of geese from the west coast of America will be recorded from the islands as accidental visitors. That any considerable number of geese will ever seek winter quarters in the islands is more than doubtful, since suitable feeding grounds of sufficient extent are not found here.

Dafila acuta. PINTAIL.—I cannot learn that this duck is ever very common on the island of Hawaii. It is, however, to be classed with the Shoveller as an annual winter migrant, though by no means so common as that species. A few are obtained each year by sportsmen.

Graculus, sp?— A cormorant made its appearance the last week in November in Hilo Harbor, where, apparently it has established headquarters, wandering from here along the coast to the south for several miles. Mr. Pratt, who has seen and shot cormorants in California many times, is my informant, and he has seen the individual in question several times at close range. It is, of course, impossible to conjecture the species.—H. W. HENSHAW, *Hilo, Hawaii.*

Notes on the Moulting of Spinus pinus and of Hirundo erythrogaster. —In the January 'Auk,' Mr. Stone has so pleasantly reviewed my paper on 'The Plumages and Moults of the Passerine Birds of New York,' that it is evident we are in complete accord as to the facts and conclusions which we have each reached working along independent lines. There are, however, two species, the Pine Finch and the Barn Swallow, about which there is yet a word to be said. Mr. Stone appears to be correct in claiming a prenuptial moult in the Pine Finch, but it is ordinarily so extremely limited that I considered it as the irregular renewal, found in spring in so many species, which scarcely deserves the name of a distinct moult. Two of Mr. Stone's Pennsylvania birds taken in May show more evidence of growth of new feathers about the head and throat, and even of new tertiaries, than I would have suspected from the other material I have studied. The re-examination of nearly 150 specimens, taken every month in the year, shows that birds of April, May and June are exceedingly worn. Among seven April and eleven May specimens, I find so little evidence of the growth of a few new feathers, and only on the throat, that Mr. Stone's specimens which I have examined are indeed a surprise to me, and suggest unusual precocity. As, however, this species is subject to a considerable amount of wear, it is probable that it belongs with those species having a very limited first prenuptial moult which is not repeated a second year, and the wear, quickly affecting the new feathers, obliterates evidences of moult.

Mr. Stone and I do not quite agree about the Barn Swallow (*Hirundo erythrogaster*), for he speaks of an "apparent prenuptial moult," basing his opinion on a bird (Phila. Acad. Nat. Sci. No. 28576, September 1, Pennsylvania), which he considers an adult after the postnuptial moult, and therefore requiring a prenuptial moult to produce the attenuated lateral rectrices of the breeding bird. The specimen in question has been kindly loaned to me, and I am satisfied it is a young bird in fresh juvenal plumage, for the slight forking of the tail and the green tinge of the back with reddish-brown edgings on the rump, nape and wing-coverts are characteristic of a dozen other young birds in my own collection. The green tinge, by the way, is peculiar to the young of all our Swallows, and of other birds with iridescent feathers, like Crows and Blackbirds, in which adults are usually bluer or purpler than young birds. Here is a case where immaturity might be shown by softening the skin and examining the ossification of the skull.

Three other interesting Barn Swallows have been sent to me by Mr. Stone. Two of them have already been noticed in his valuable paper on moult, and I agree with him that two of them (Phila. Acad. Nat, Sci., No. 28574, August 7, Pennsylvania, and No. 28577, September 1, Pennsylvania), are adults just beginning the postnuptial moult, which, doubtless, would have been completed after they had reached winter quarters, or perhaps while on the journey thither. The same sort of feather renewal takes place among some of the Tyrannidæ, Laridæ, Limicolæ and others

of strong flight, and the body feathers are very apt to precede in their growth the remiges and rectrices, although in the two specimens cited, the rectrices are already partly renewed. The third specimen (Phila. Acad. Nat. Sci., No. 15661, French Guiana), is unfortunately undated, but it is evidently passing from the juvenal plumage by what must be called a postjuvenal moult. The worn first primary, inner secondaries and a few of the rectrices, together with a green-tinged back, indicate a young bird. The crown now worn brown also indicates juvenal plumage, while new feathers are breaking from their sheaths, both on the head and throat. These birds all bear out my conclusion that adult Swallows moult earlier than young birds which undergo a complete postjuvenal moult, often in midwinter. It is, on the whole, expedient to speak of a postjuvenal moult and not of a prenuptial, even in those species which are late in assuming a first winter dress, which then becomes that of the first summer simply through wear. This sequence of plumages obtains largely both among the North American Hirundinidæ and Tyrannidæ, and I am glad of this opportunity of calling attention to it.

I would also correct here a slip of Mr. Stone's pen at page 118 of his review in 'The Auk,' where he has inadvertently credited the Cross bills with a "prenuptial" moult, meaning of course, the postnuptial.— JONATHAN DWIGHT, JR., *New York City.*

To Remove Fat from Bird Skins.— Fat on sea and water birds is especially difficult to get rid of. It means long and tedious scraping, often with unsatisfactory results. Benzine, sulphuric ether, alkalies and other solvents of grease and oils, are either unpleasant to use, dangerous in a room with fire or lamp, evaporate rapidly or are expensive, and after all only dissolve the contiguous layer of fat at each application, often leaving the skin in bad condition.

One day, when almost on the point of throwing away in despair a hopelessly fat specimen, which had been scraped until nearly disintegrated, and, after having been treated with cornmeal, sawdust and plaster of Paris, still showed oil when pinched, the idea occurred to me of using an absorbent at a sufficiently high temperature to melt out the oil and absorb it at the same time. Some plaster of Paris was put in a bread tin, heated on top of the stove until fairly hot to the hand, and then a thick layer was spread on the bird skin. This was pressed down and manipulated until a sufficient time seemed to have elapsed, when it was carefully brushed off. The result exceeded my expectation. A second application practically removed all the oil. Since then I have continued using this method with success.

The skin must, of course, be first scraped so as to break the fat-containing tissues and as much fat as possible scraped off, using cornmeal or sawdust as an absorbent while operating. After this the hot absorbent may be applied. The skin may seem very dry after the operation, but this is really only on the surface, and going over it with a damp

sponge or cloth will moisten it enough to make the necessary amount of arsenic adhere and to keep the skin pliable until stuffed.

Fine sawdust or cornmeal may be used by taking care to stir while heating, but plaster of Paris gives the best results, as it can be heated to a much higher temperature than anything organic, and with no trouble. On birds of dark colored plumage, however, plaster must be applied in such a manner as not to come in contact with the feathers, as it will usually stick to them enough to lighten the shade.—JOSEPH MAILLIARD, *San Geronimo, Marin Co., Cal.*

RECENT LITERATURE.

Barrington's 'The Migration of Birds at Irish Light Stations.[1]— In this volume of nearly 1000 pages we have the results of observations, continuously and systematically carried on, at the Irish light-stations from 1881 to 1897, or for a period of eighteen years. Observations appear to have been made at some fifty lighthouses and lightships, the returns embracing about a thousand schedules and "about thirty thousand separate observations," and over two thousand specimens. The elaboration of this enormous amount of information involved years of labor, and Mr. Barrington makes acknowledgment to Mr. C. B. Moffat for important aid in its analysis. A list of the light stations is given as part of the introductory matter, which is immediately followed by 'Analysis of the Irish Migration Reports, 1881–1897' (pp. *1–262*), the reports being summarized for each of the species observed, these summaries sometimes occupying several pages for a single species, including comment on the various facts reported.

The species number about 170, and are treated in systematic sequence. Following this is a statement of 'Some of the Principal Points of

[1] The | Migration of Birds | as observed at | Irish Lighthouses and Lightships | including | the Original Reports | from 1888–97, now published for the first time, and | an Analysis | of these and of the previously published Reports from 1881–87. | Together with | an Appendix | giving the measurements | of about 1600 wings. | By | Richard M. Barrington, M. A., L. L. B., F. L. S., | Member of the British Ornithologist's Union, and of the British Association | Committee for obtaining Observations on the Migration of | Birds at Lighthouses and Lightships. | London: | R. H. Porter, 7 Princes Street, Cavendish Square, W. | Dublin: | Edward Ponsonby, 116 Grafton Street. [1900.]—8vo, pp. i–xxv. + *1–285* + 1–667, map and text cuts. Only 350 copies printed.

Interest,' 'Some General Remarks,' and 'Various Tables,' the latter referring to a great variety of facts bearing on the subject of migration. The 'Reports on the Migration of Birds as observed at Lighthouses and Lightships on the Irish Coast, 1888–1897 inclusive' occupy over six hundred pages (pp. 1–619), and are followed by an 'Appendix' (pp. 621–660), giving 'Measurements of Wings of Birds obtained at Irish Light-Stations,' the birds having been killed by striking the lanterns and sent in for identification.

It is needless to say that we have here an enormous amount of information on the migration of birds along the Irish coasts, which is clearly presented in much detail. While of great interest in a local sense, it is perhaps not to be expected that it will by itself have a very important bearing upon the larger questions involved in the general problem of migration. The measurement of wings has shown that the longer-winged examples of a species are the first to arrive in spring, and in some cases also in autumn; but "neither the wings nor the statistics afford any sufficient clue to enable one to determine positively in any given species whether the young birds precede the old ones or not . . . . There is one point in favor of the supposition that the old birds are in the van of the advancing army in autumn — viz., that in the majority of cases the longer-winged birds come first" (p. *264*). Some evidence is presented to show that different species of birds follow different migration lines in their journey across Ireland, some having a wide migration route and others a more restricted one; while the line of direction also varies in different species.

Ornithologists are certainly indebted to Mr. Barrington for his long and arduous labor in collecting such a mass of observations, and to him and his friend Mr. Moffat for their reduction to such a state of order as to be available for study by other workers in the same field. The cost of this work, including its publication in a neat and convenient form, must be, as the author intimates, largely a labor of love, the edition being limited to 350 copies.— J. A. A.

Gätke's 'Helgoland,' Second German Edition.[1] — The second German edition of this well-known work, issued in 16 parts during 1899 and 1900, has been completed, and forms a volume of much the same size and appearance as the first edition. It is brought out, as before, under the editorship of Dr. R. Blasius of Braunschweig, who states in his preface that the original text has not been changed, and that all interpolations are enclosed in brackets or take the form of footnotes signed by the editor. The for-

[1] Die | Vogelwarte Helgoland. | Von | Heinrich Gätke, | weiland | . . . . [=5 lines of titles] Herausgegeben | von | Professor Dr. Rudolf Blasius. | Zweite vermehrte Auflage. | [Cut] Grün ist das Land, Roth ist die Kant', | Weiss ist der Sand, Das sind die Farben von Helgoland. | Braunschweig 1900. | Druck und Verlag von Joh. Heinr. Meyer. Roy. 8vo, pp. i–xvi + 1–654. Frontispiece, portrait of Gätke, and various text illustrations.

mer seem to consist mainly of additions to the bibliographical citations, through references to the British Museum 'Catalogue of Birds' and to the new edition of 'Naumann.' The editor's important footnotes supplement the text by the addition of various new facts that have been made public since the publication of the original edition in 1891. As a short notice of the original edition was promptly given in this journal (VIII, 1891, pp. 299, 300), and very full notices of the English translation published in 1895 (Auk, XII, 1895, pp. 322–346, and XIII, 1896, pp. 137–153), little need be said in the present connection beyond announcing the completion of this second beautifully printed edition of 'Helgoland.'—J. A. A.

Pollard's 'Birds of my Parish.'[1]—In the great procession of popular bird books that marks the present period it would seem that there is scant room for originality in the case of the later claimants for attention. That the field is not yet exhausted is well shown by the author of the 'Birds of my Parish,' which combines in a peculiar way fresh field notes with a large amount of information about the traits and behavior of captive individual birds of quite a number of the commoner British species. This is mixed with a deal of small talk of the imaginative order supposed to be said by the birds themselves. It is all very entertaining, if possibly trivial and unimportant as 'ornithology'; but the author is so thoroughly in sympathy with the feathered household pets thus brought before us, and also so much at home with the birds in their free surroundings, that this singular mixture of bird lore and 'bird talk' is decidedly pleasant reading. The scene is the "parish of Haquford in East Anglia," an area of some 1600 acres. "This small parish in Norfolk can boast," says the author, "to my present knowledge of .... 76 varieties. None of these are very rare or uncommon birds, but the better one knows birds, the better one loves them." Much is pleasantly said of these wild birds in the regular orthodox style of ornithology, while much more is told entertainingly of pet Bullfinches, Goldfinches, Chaffinches, Jackdaws, etc., sandwiched with imaginary soliloquies and conversations by the birds themselves, doubtless also intended to impart information and inspire sympathy.—J. A. A.

Collett on the Skull and Auricular Openings in North European Owls.—Dr. Collett's important paper on the asymmetry of the skull and auditory structures in the Owls of Northern Europe, originally published in Norwegian in 1881, has now been made more readily accessible to English readers by Dr. Shufeldt's recent translation,[2] with which the text figures

[1] The Birds | of my Parish | — | By Evelyn H. Pollard | With Illustrations | — | John Lane: The Bodley Head | London and New York. MDCCCC, —Crown 8vo, pp. i–xiii, 15–295, 6 photogravure plates. Price, $1.50.

[2] Professor Collett on the Morphology of the Cranium and the Auricular Openings in the North-European Species of the Family Strigidæ. By R. W. Shufeldt, M. D. Journ. of Morphology, Vol. XVII, No. 1, 1900, pp. 119–176. pll. xv–xx.

and lithographic plates have been reproduced. This paper, though the facts it presents, after the lapse of twenty years, have ceased to be novel, has lost little of its interest and importance, and is well worthy of a new lease of life in an English dress. Dr. Shufeldt has therefore done a distinct service to ornithology in thus placing the paper so conveniently before English readers. He has also added a few footnotes, and given, at the close, a résumé of recent views of taxonomers on the systematic position and relationships of the Owls. — J. A. A.

Merriam and Preble on the Summer Birds of Western Maryland.— This brochure from the Reports of the Maryland Geological Survey[1] consists of two papers; the first, by Dr. C. Hart Merriam (*l. c.*, pp. 291–293), treats of 'The Life Zones and Areas of Allegany County,' and deals with the general floral and faunal features of the region; the second, by Mr. E. A. Preble (pp. 294–307), gives an annotated list of 'The Summer Birds of Western Maryland,' numbering 100 species, and all are believed to breed in the region. According to Dr. Merriam, "The fauna of Allegany County is a mixture of Carolinian and Alleghanian species and comprises, so far as known, no boreal islands. The Potomac Valley, and valleys of the principal streams, are Carolinian; the upland, Alleghanian." In Garret County, above 2600 feet, "cold sphagnum and alder swamps abound," which "contain a strong admixture of high Transition and even Boreal species. . . . The cutting off of the spruce and hemlock from these small boreal islands lets in the hot sun and results, in numerous instances, in changing the fauna and flora from Canadian to Alleghanian."

We are surprised to notice a number of typographical errors in the technical names, for which doubtless the authors are not responsible. The paper is a valuable contribution to our knowledge of the faunal character and summer range of the birds of western Maryland.—J. A. A.

Loomis on California Water Birds.[2] — This is No. V of Mr. Loomis's series of papers on 'California Water Birds,' and gives the results of his observations made in the vicinity of Monterey from May 1 to June 12, 1897. A 'Summary of Movements' for this period of observation is given, followed by some further discussion of the 'Cause of Return

[1] The Fauna and Flora. The Life Zones and areas of Allegany County. The Summer Birds of Western Maryland. By C. Hart Merriam and Edward A. Preble, Biological Survey, U. S. Dept. Agriculture. Maryland Geological Survey, Allegany County Report, pp. 291–307. Nov., 1900.

[2] California Water Birds. No. V. Vicinity of Monterey in May and early June. By Leverett M. Loomis, Curator of the Department of Ornithology. Proc. California Acad. of Sciences, 3d Ser., Zoöl., Vol. II, No. 5, pp. 349–363. Issued Nov. 24, 1900.

Migration,' and an annotated list of the 36 species observed (pp. 355–363). He says, "Subspecific names are omitted; otherwise the nomenclature conforms to the A. O. U. 'Check-List,' second edition and eighth and ninth supplements." So when we read (p. 357): "I have examined the specimen upon which Dr. Cooper based his California record of *Uria lomvia* (Proc. Calif. Acad. Sci., Vol. V, p. 414; Auk, III, p. 126) and find it is an immature *Uria troile*," we must understand the reference to *U. troile* to mean *U. troile californica!* There is more or less comment on the transition stages of plumage of various species observed, but no reference to the condition of the specimens as regards moulting, which, in some of the species at least, must have been in progress. The paper is a valuable contribution to a better knowledge of the local movements and spring migration of Pacific Coast water birds. — J. A. A.

Grinnell on Alaskan Birds.[1] — This paper records 21 species from the Pribilof Islands, based on specimens in the collection of the Leland Stanford University, adding two species, namely, *Totanus melanoleucus* and *Saxicola œnantha*, to the list of previously recorded species, which now number 72. Four are recorded from Amagnak Island, 4 from Belkovski Bay, 3 from Unga Island, 19 from Kadiak Island, and 18 from Prince William Sound. A new subspecies of Savanna Sparrow is described from Kadiak Island, under the name *Ammodramus sandwichensis xanthophrys*. The *Leucosticte kadiaka* McGregor is considered to be a subspecies of *L. tephrocotis*, and *griseonucha* is believed to be also merely a subspecies of *tephrocotis*, he having specimens in hand which "indicate an almost complete gradation" between them. Of the Barn Swallow he says: "The Alaska skins I have examined (Kotzebue Sound and Sitka) do not seem to differ on an average in wing measurements and extent of white markings on the tail, from United States specimens," and the specimen recorded from Nutchuk, Prince William Sound, "does not appear to answer to the characters assigned by Palmer (*cf. antea*, p. 176) to *unalaschensis*. — J. A. A.

Mrs. Eckstorm's 'The Bird Book.'[2] — This is one of D. C. Heath and Company's 'supplementary reading' books for schools. To quote from the preface: "The arrangement of the book has two ends in view: to adapt the study to the school year, and to present it so that when the pupil begins field work he shall be able to do it with some general idea of what is

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[1] Record of Alaskan Birds in the Collection of the Leland Stanford Junior University. By Joseph Grinnell. The Condor, Vol. III, No. 1, Jan. 15, 1901, pp. 19–23.

[2] The Bird Book | By | Fannie Hardy Eckstorm | — | Boston, U. S. A. | D. C. Heath & Co., Publishers. | 1901. — Sm. 8vo., pp. xii + 276, with 26 pll. and 30 text figures. Price, 60 cents.

worth observing." The work is divided into four parts, entitled: Part I, 'Water-birds in their Homes: Little Studies in Environment' (pp. 3–64); Part II, 'Structure and Comparison: Little Stories in Differentiation' (p. 67–118); Part III, 'Problems in Bird Life: Little Studies in Zoölogical Theory' (pp. 121–172); Part IV, 'Some Common Land-Birds; Little Studies in the Art of Observation' (pp. 175–259); and an Appendix (pp. 263–276). Each part consists of a number of topics, to mention a few of which under each will suffice to give an idea of the scope and mode of treatment. Thus, in Part I, we have 'Among the Reeds and Rushes,' treating of the Grebe and Loon; 'An Alaskan Island — The Ancient Murrelet,' and eight or ten other sketches. In Part II, such matters as 'Comparing Bones,' 'The foot of a Swimming Bird,' 'A Feather,' 'Comparing Feet,' 'Comparing Bills,' etc.; in Part III, 'The Basis of Classification,' 'How Birds are named,' 'A Subspecies,' 'Protection by Color,' 'Distribution,' 'Migration,' etc.; in Part IV, 'About Birds' Drinking,' 'How a Hawk eats his Food,' 'How the Shrike hunts,' 'A Dead Beat — the Cowbird,' etc. The Appendix gives 'Zoögeographical Divisions of the World' (with a map of those of North America), 'Hints on observing Birds,' etc., including, finally, a list of books on North American ornithology, consisting of about 70 well selected titles. While there is a very full table of contents, there is unfortunately no index, which, in such a work, is an important and surprising omission.

The book as a whole is well planned for its purpose, and fills a new rôle in the list of popular bird books; the topics are well chosen and the whys and wherefores of many points in bird philosophy are attractively and intelligently presented. A lapsus here and there will not escape the critical reader, as on p. 134, where there seems to be a little confusion as to east and west in reference to the races of Crow Blackbirds; but the few slips of a semi-technical character really detract little from the usefulness of this very excellent little book. — J. A. A.

Mrs. Eckstorm's 'The Woodpeckers.'[1] — This little book treats of the family of Woodpeckers as represented in North America, dealing with their habits and structure in an intelligent and orderly way, in a series of sixteen short chapters, the character of which may be gathered from such headings as 'How to know a Woodpecker,' 'How the Woodpecker catches a Grub,' how he 'courts his mate,' 'makes a house,' etc., with four chapters on his 'tools' — his bill, foot, tail, and tongue, etc. A special chapter is also devoted to each of several leading species, as the Flicker, the Downy Woodpecker, the Yellow-bellied Sapsucker, the Red-headed Woodpecker, and the Californian Woodpecker. Then there is a

[1] The Woodpeckers | By | Fannie Hardy Eckstorm | With Illustrations | [Vignette] Boston and New York | Houghton Mifflin and Company | The Riverside Press, Cambridge | 1901 — Square 12mo. pp. viii + 132, 5 col. pll. and 22 text cuts. Price, $1.00.

chapter on 'acquired habits,' and on the 'argument from design,' and finally an Appendix (pp. 114–127) comprising a 'Key to the Woodpeckers of North America,' and 'Descriptions of North American Woodpeckers.' There is also a good index. The book evinces a thorough familiarity with woodpecker life and structure, gained through personal observation and study, and ability to impart such knowledge clearly and in an attractive way without any sacrifice of scientific accuracy. The book is thus well adapted to instruct and inspire amateurs, whether youthful or of more advanced years. Of the illustrations it is enough to say that the five colored plates are by Fuertes, and the text illustrations from drawings by J. L. Ridgway.—J. A. A.

Shufeldt's Recent Contributions to our Knowledge of the Osteology of Birds.[1]—In the first of these papers Dr. Shufeldt briefly reviews the osteological characters of the Sand Grouse, concluding that they belong where they are usually placed, between the Pigeons and Gallinaceous Birds, and form a suborder, the Pterocles.

In the Osteology of the Woodpeckers we are given a somewhat detailed and comparative account of the osteology of the North American Woodpeckers, which though somewhat uneven in its method of treating the various portions of the skeleton, forms a good work of reference. It is to be regretted that a single species was not selected for description and the various parts described in detail, the points wherein other species differed from this being noted. This would have condensed the paper and not only have saved much repetition, but enabled the user of this paper to at once find the information of which he is in search. This method is practically followed in discussing the sternum, and it is very convenient; when we wish to know the condition of the cranium in respect to the extent to which it is pitted by the roots of the feathers we are obliged to turn over page after page. Still it is most welcome to have the information in one paper, and the summary of characters towards the end of the paper condenses the general characters of the group into two pages. The question of the vomer is gone over and most will agree with Dr. Shufeldt that when this bone is present it is in its proper place, that the irregular ossifications are neither vomers nor palatines, but adventitious ossicles. Among other points well brought out is the great difference in the length and disposition of the hyoid. It may be noted that the first

[1] On the Systematic Position of the Sand Grouse (Pterocles; Syrrhaptes). By R. W. Shufeldt. American Naturalist, XXXV, No. 409, January, 1901, pp. 11–16.

On the Osteology of the Woodpeckers. By R. W. Shufeldt, M. D. Proc. Am. Phil. Soc. Phila., XXXIX, No. 164, pp. 578–622, pl. ix.

On the Osteology of the Striges. (Strigidæ and Bubonidæ). By R. W. Shufeldt, M. D. Proc. Am. Phil. Soc., XXXIX, No. 164, pp. 665–722, pll. x–xvii.

metatarsal of *Picoides is* present, though concealed oeneath the skin, as noted by Beddard.

The 'Osteology of the Striges' is not up to the standard of the paper on the Woodpeckers, for the descriptive matter is too long and too much scattered to be readily used; moreover we lack the summary of characters at the end, this not being compensated for by the fact that the main characters are given on two or three pages at the outset. — F. A. L.

Chapman on the Genus Sturnella.[1] — With the aid of a much larger series of specimens than has been available to previous writers on the subject, Mr. Chapman has been able to furnish the most valuable contribution to the history of this perplexing genus that has yet appeared. After characterizing the various races of Meadowlarks hitherto described, and pointing out the striking differences between the arid (*neglecta*) and the humid (*magna*) groups, the author considers the question of inter-relationships between the two. His conclusions are that the two groups were originally evolved in Mexico, *neglecta* occupying the table land and *magna* the lower humid areas, their relationships here being simply that of well marked geographic races.

Subsequently the two spread northward, *neglecta* covering the western United States and *magna* the eastern region. Still later the two forms, which in the north were quite distinct, have converged and intermingled, thus accounting for the presence of typical *magna* and *neglecta*, as well as intermediates or 'hybrids', side by side in Minnesota and Texas, a fact which is well established.

Due credit is given throughout the paper to Mr. E. W. Nelson, whose careful collecting in Mexico has cleared up the obscurity which had previously prevailed as to the relationships of the two forms in the south.

In emphasizing the fact that the main difference between the *magna* and *neglecta* groups is one of depth of color Mr. Chapman points out that the form recently described as *S. magna hoopesi* should be associated with the latter in spite of the extent of yellow on the sides of the throat. Unless it is deemed advisable to consider the above groups as representing two distinct species, no change in nomenclature is necessary.

Several interesting half-tones from photographs of skins and feathers illustrate the paper, and show clearly the contrast between the light and dark birds. — W. S.

Eaton's 'Birds of Western New York.' [2] — Mr. Eaton's list relates to "the western portion of New York State, extending eastward through the 'Finger Lake' region," and consisting of three east and west belts,

[1] A Study of the Genus Sturnella. By Frank M. Chapman, Bull. Am. Mus. Nat. Hist., Vol. XIII, 1900, pp. 297–320.

[2] Birds of Western New York. By Elon Howard Eaton. Proc. Rochester Acad., Vol. IV, pp. 1-64. Feb. 15, 1901.

varying in elevation. The northern belt, "lying along the southern shore of Lake Ontario, and about Oneida, Cayuga and Senaca Lakes," is the lowest. The middle belt is more elevated, consisting of high, rolling plains, "their lowest elevation of 1000 feet being along an irregular line from Buffalo to Syracuse." The southernmost consists of the northern extremity of the Alleghany Plateau, ranging in elevation from 1500 to 2000 feet, and draining southward. This southern belt is the coldest and faunally the most northern, while the northern belt is the warmest and faunally the most southern, "the influence of altitude, and the modifying effects of the Great Lakes, combining to transpose the normal positions of the life zones." There thus results a peculiar juxtaposition of species in many localities, Canadian and Carolinian species being found breeding side by side, as the Hooded Warbler and the Red-bellied Woodpecker in the same localities with the Junco and the Blackburnian, Black-throated Blue, Canadian, and Mourning Warblers.

Mr. Eaton's list numbers 297 "definitely recorded" species, 18 species "with indefinite" or doubtful records, 2 species now exterminated, and 2 introduced foreign species. The list has evidently been prepared with great care, and is briefly but quite satisfactorily annotated. The main list is followed by a very extended 'Hypothetical List' of 55 species. While, as the author states, "many of these birds are more liable to be found here than the accidental species which have actually been captured," it is rather stretching the function of such a list to include such accidental Old World 'waifs and strays' as the Corn Crake, Ruff, and other species of that category.

The 'Introductory' (pp. 1–15) gives a very clear account of the physical and faunal characteristics of the region, much explanatory matter relating to the general character and make-up of the lists, a summary, a bibliography, and 'Migration and Residence Tables,' by means of which the seasons of occurrence and relative abundance of all the species are shown graphically. This application of a well-known graphic method we have never before seen introduced into a faunal list; and now that its utility is so evident the wonder is that it has not been tried before.

While the use or non-use of capitals in certain connections, and matters of punctuation in general, are perhaps mere trifling matters of taste we trust that certain recent innovations in such matters, here followed, will not be often repeated; the saving of space, if that be an object, thus accomplished is certainly trifling, and hardly offsets the shock it gives one to see names of groups or of species printed with a lower case initial when used in headings and subtitles. — J. A. A.

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CORRESPONDENCE.

Early Editions of Wilson's Ornithology.

EDITORS OF 'THE AUK.'

Dear Sirs:—The following notes concerning the early editions of Wilson's 'American Ornithology' may interest some of the readers of your journal. The original edition, as is well known, was published in nine folio volumes at Philadelphia, during the years 1808 to 1814. Wilson died on the 23d of August, 1813, while the eighth volume was in the press. The eighth and ninth volumes were published in 1814, under the superintendence of George Ord, who furnished the text that accompanies the few plates Wilson had drawn for the ninth volume.

Two hundred copies of Vol. I were published in September, 1808. On the 21st of that month Wilson started on a tour through the New England States to exhibit his book and solicit subscribers, and soon afterward he travelled south on the same mission as far as Savannah, Ga. On his return to Philadelphia, in 1809, the subscription list was large enough to warrant the publication of three hundred additional copies of the first volume.

The second edition of Vol. I bears the original date 1808, although it was not published till 1809, and there is nothing on its face to distinguish it from the original issue, until the two are collated. It then appears that the second issue is truly a new edition; that the text was all reset, and that the author seized the opportunity thus offered to make certain additions to the text and to correct some errors and carelessly written passages. As an example: an alteration of the text that occurs on page 33, in the biography of the Wood Thrush, is the result of knowledge acquired by Wilson during his trip to South Carolina and Georgia in the winter of 1808-09, after the first edition had been published. In the first edition the passage in question reads thus: "Tho' it is believed that some of our birds of passage, and among them the present species, winter in the Carolinas, yet they rarely breed there; and when they do, they are certainly vocal." In the second edition this is replaced by the following: "I have myself searched the woods of Carolina and Georgia, in winter, for this bird, in vain, nor do I believe that it ever winters in these states." Again, on page 34, referring to the Hermit Thrush, Wilson adds to the text in the second edition the statement that he has found this bird numerous in the myrtle swamps of Carolina in the depth of winter.

With regard to the text of subsequent editions of Wilson: Ord's "reprint" of 1824 (bearing date of 1808) of course follows the amended text of Wilson's second issue of the first volume, so do Harrison Hall's edition

(1828), Jardine's (1832), and the various reprints of Jardine, such as Brewer's (1840), and those published by Chatto & Windus (1876), etc. The editions published by Porter & Coates (Phila., 1871, 1878), are printed from Hall's edition of 1828–29. Jameson's edition (1831) alone, so far as I have observed, reproduces the text of the first edition of Vol. I.

The last three volumes of Wilson's work were not so carefully elaborated as the earlier volumes. Ord therefore subjected these volumes to a careful revision and published them in a second edition,—Vols. VII, VIII, in 1824, Vol. IX in 1825. In the second edition of these volumes Ord introduced extensive additions to the text of Wilson and important changes in the nomenclature, while the sketch of the author's life, prefixed to the ninth volume, was enlarged from 36 pages to 198 pages. The changes in the nomenclature are tabulated in the editor's prefaces to the second edition; but the alterations and additions to the text are often indistinguishable without a collation of the two editions.

While issuing the second edition of Vols. VII–IX, Ord reprinted the rest of the volumes, I–VI, in 1824, retaining on their title-pages the dates of the original edition of these volumes, viz. 1808–12. Comparison of the "reprints" with original copies of Vols. I–VI reveals the fact that the re-issue is far from being a mere reprint of the first edition. In the editio princeps Wilson made certain emendations of the nomenclature, etc., at the eleventh hour, in the indexes to the several volumes, and more particularly in the 'List of the Land Birds of the United States,' which appeared in the sixth volume, in 1812. In the reprint of 1824 Ord incorporated most of these emendations in their proper places in the text, and in a few instances introduced changes of his own. These reprints, then, taken together with the 1824–25 edition of Vols. VII–IX, strictly speaking, constitute the second or Ord edition of the 'American Ornithology,' the true date of which is 1824–25.

Two of Ord's amendments in these so-called reprinted volumes affect the nomenclature. Twice had Wilson applied the same name to two different birds. In Vol. VII the Sora Rail is called *Rallus virginianus:* in Vol. VI the same name is given to the Virginia Rail. The Slate-colored [Sharp-shinned] Hawk is described under the name *Falco pennsylvanicus* on p. 13 of Vol. VI, while on p. 92 of the same volume the Broad-winged Hawk figures by the same name. In the reprint of 1824, the Sora Rail appears as *Rallus carolinus*, the name of the Broad-winged Hawk is changed to *Falco latissimus*. The latter specific name is the one sanctioned by the A. O. U. Check-List, in which it is credited to Wilson, 1812, instead of Ord, 1824. During the same year, 1824, Bonaparte (Journ. Acad. Nat. Sci. Phila., III, 348) drew attention to Wilson's double use of the name *pennsylvanicus* in the genus *Falco*, and proposed the name *wilsoni* for the Broad-winged Hawk; but in a footnote he courteously withdrew this name in favor of *latissimus* on being told by Ord that he had chosen this name in his forthcoming reprint of Wilson. Both of these names, however, are anticipated by *Sparvius platypterus*, a name

assigned to the "Broad-winged Hawk" of Wilson by Vieillot in 1823 (Encycl. Méthod., Ornithol., III, 1273). The correct name of this bird, therefore, is ***Buteo platypterus*** (Vieill.).

The history of the Ord reprints was well understood by contemporary writers, but as time went on confusion arose from the false dates on their titles. So early as 1853, Cassin, in his 'Illustrations of the Birds of California, Texas, etc.,' p. 101, declared that only the last three volumes of Wilson were republished, and that the names *pennsylvanicus* and *latissimus* as applied to the Broad-winged Hawk occurred in different copies of the original edition. He therefore inferred that the latter name was substituted by Wilson himself, while the sheets were going through the press. Cassin further affirmed that Mr. Ord told him that he had nothing to do with either of the names in question,—a lapse of memory not remarkable in a man who at the time Cassin wrote had numbered more than three score and ten years. As a matter of fact, a *Falco latissimus* copy of Vol. VI bears within itself indisputable proof that it could not have been printed in 1812. It was in the sixth volume that Wilson inserted his 'General Index of the Land Birds,' which included some species to be treated of in later volumes of the work. The places for the volume and page references in such cases were necessarily left blank, with notice to the reader that the blanks might be filled up in MS. after the publication of the later volumes. Now in those copies in which the name *Falco latissimus* appears, these blank spaces are occupied by printed references to the pagination of subsequent volumes, including the ninth, which was not only printed, but written (by Ord himself) after Wilson was in his grave.

Sets purporting to be the original edition are sometimes made up by combining volumes belonging to the first and second editions. When this mixture involves the first six volumes, which bear the same ostensible dates in both editions, a convenient ear-mark for detecting the Ord reprints will be found in the printers' signatures. The signature of the sheet following Z is a double A. In the original edition the double letter is a small capital and lower case (Aa),—in the 1824 reprints it is capital and small capital (AA).

WALTER FAXON.

Cambridge, Mass.

NOTES AND NEWS.

DR. GUSTAV HARTLAUB, an Honorary Member of the American Ornithologists' Union, died at his home in Bremen on Nov. 20, 1900, in the 87th year of his age. From memorial notices by Dr. Rudolf Blasius (Zeitschrift für Orn., Jan. 1901) and Dr. Moritz Lindeman (Orn. Monatsb., Jan. 1901) we learn that Dr. Hartlaub was born in Bremen, Nov. 8, 1814, his father being the head of one of the oldest and most prominent mercantile houses of that city, and also a senator. He received his early education at the Bremen training school, and later studied medicine and natural history at the universities of Bonn, Berlin, and Gœttingen. After receiving his medical degree he traveled in Austria, Holland, France, England and Scotland, studying in Vienna, Leyden, Paris, London and Edinburgh. He then settled in Bremen as a practising physician, following his profession till his death, and visiting the Alps of Northern Italy and Switzerland for a few weeks in summer for rest and recreation.

As regards his ornithological work, for twenty-five years (1846–1871) he wrote for Troschel's 'Archiv für Naturgeschichte' the 'Berichte über die Leistungen in Naturgeschichte der Vögel,' the most useful and valuable record of ornithological literature for this period. In 1857, appeared his 'System der Ornithologie Westafrika's,' the first general work on the birds of that region, and still one of the most useful. His 'Beitrag zur Fauna Centralpolynesiens' followed in 1867, and his 'Die Vogel Madagaskars und der benachbarten Inselgruppen' in 1877. His lesser ornithological writings number several hundred titles, published mainly in the 'Journal für Ornithologie' and in the 'Abhandlungen' of the Bremen Natural History Society. He was greatly interested in geographical exploration and exerted his great influence in behalf of numerous German expeditions of this character. He was president for many years of the Bremen Natural History Society, and also of the Deutsche Ornithologische Gesselschaft. His services to descriptive ornithology have been eminent, his name having long been one of the most prominent in the literature of the science.

BARON EDMOND DE SÉLYS LONG-SCHAMPS, a Corresponding Member of the American Ornithologists' Union. died at his home in Liége, Belgium, Dec. 11, 1900, in the 87th year of his age. A notice of his life and scientific work will be given in a subsequent number of this journal.

MR. GEORGE A. BOARDMAN, an Associate Member of the American Ornithologists' Union, died at his home at Calais, Maine, Jan. 11, 1901, at the age of 83 years. He was born in Newburyport, Mass., Feb. 5, 1818, and went with his parents to Calais in 1828. His ancestors came from

Yorkshire, England, and settled in Newbury, Mass., in 1637. Mr. Boardman, for over thirty years, was engaged in the lumber business on the St. Croix River, retiring from active business in 1871. He was well known as an enthusiastic naturalist and sportsman, and was a warm friend of the late Dr. T. M. Brewer and Professor Baird, and of many later and less prominent naturalists. It was his habit for many years to spend his winters in Florida, stopping at Washington, New York, and other points on the journey to and from Maine to his winter home, to renew acquaintance with his many naturalist and other friends.

The present writer first made his acquaintance at Jacksonville, Florida, in December, 1868, and later the same winter passed a few days with him at Enterprise, on Lake George. He had already become familiar with the bird life of Florida, where for many years it was his habit to collect specimens and take field notes, giving liberally of his specimens to Professor Baird for the Smithsonian Institution, and sharing his field notes with other workers. As early as 1862 he published a 'Catalogue of the Birds found in the Vicinity of Calais, Maine, and about the Islands at the mouth of the Bay of Fundy' (Proc. Boston Soc. Nat. Hist., IX, pp. 122–132), an annotated list of 231 species. His collection of Maine birds is notably complete, numbering it is said, 278 species (*cf.* Forest and Stream, Aug. 5, 1899), and comprising some 2500 specimens, mounted and in skins, besides a large collection of eggs. He was a frequent contributor to 'Forest and Stream' and other natural history journals, including the 'American Naturalist' and the 'Bulletin of the Nuttall Ornithological Club,' and up to the last days of his life is said to have contributed, "statedly, every week," to the Calais 'Times,' "an article on such natural history subjects as engage the interest of the household readers and inform them of the peculiar places which familiar creatures of the fields and swamps and woods occupy in the animal kingdom."

Mr. Boardman was a man of genial and attractive personality, and after his retirement from business, some thirty years ago, devoted much of his leisure to travel and natural history pursuits, his interests in such matters having a wide scope.

Captain John Clifford Brown, United States Volunteers, an Associate Member of the American Ornithologists' Union, died January 16, 1901, at Los Angeles, California, of dysentery contracted in the Philippines. Captain Brown was born at Portland, Maine, March 28, 1872. He early showed a strong taste for electrical science, and made a special study of this at the Massachusetts Institute of Technology, of Boston, where he graduated with very high rank in 1893. Almost immediately thereafter he was employed by the New York Telegraph and Telephone Company in its engineer department. His advancement was rapid, and, at the breaking out of the war with Spain, he occupied a position of responsibility not often given to so young a man. He had, however, been a member of the Seventh Regiment for several years, and he believed it

his duty to go to the war. He went as a captain in the Eighth New York. It should be said that he went eagerly; for he was a born soldier, — a tall, lithe, very handsome man, of the pronounced blonde type, quiet, fearless, and a natural leader. He was kept at Chickamauga and elsewhere in the South throughout the war, serving, after the Eighth was mustered out, as a lieutenant in the Two-Hundred-and-Third, in his eagerness to see active service. After the latter regiment was also mustered out, he enlisted, on June 22, 1899, in the engineer corps of the regular army, and was at once sent to the Philippines.

Brown was the only man of the engineers who went with General Young on the famous 'hike' from a point near Manila through Luzon to Vigan on the north coast. He won the highest commendations from his superiors, including General Young, for gallantry and for efficiency as an engineer throughout that most arduous expedition. All of the maps of the route followed were drawn by him, under almost inconceivable difficulties, and are beautiful examples of field drafting.

Returned to Manila, Brown was put in charge of the building of a bridge at Paranaque. It is characteristic of him that he worked upon this bridge for weeks while so ill that he should have been in hospital. He stuck to the work until it was finished, and thus made his death certain. Had he lived, he would soon have received the commission in the regular army which he coveted.

Captain Brown was always a lover and student of birds. While living at Portland, he wrote a number of interesting notes which were published in 'The Auk.' — N. C. B.

James MacKinlay, of Pictou, Nova Scotia, an Associate Member of the American Ornithologists' Union, died at his home on November 30, 1899. Mr. MacKinlay was born in Pictou on June 16, 1819, and throughout his life was an ardent student of birds. His collection, containing many rare and interesting specimens, was presented by him, some years before his death, to the Pictou Academy, where it is now on exhibition.

Audubon Whelock Ridgway, only son of Robert Ridgway, died in Chicago, Feb. 22, 1901, of pneumonia. Although not a member of the American Ornithologist's Union he had taken up the study of birds, and at the time of his death was assistant in the department of ornithology in the Field Columbian Museum, a position to which he was appointed in November 1900. During this short term of service he had, in addition to the varied work connected with the museum, prepared a list of desiderata among the birds of Illinois, and named a large collection of Philippine Island birds. Although having so brief a time in which to prove his ability, he performed the duties of his position to the complete satisfaction of his employers, both the Director of the museum and the Curator of the Department of Ornithology highly commending his efforts.

Mr. Ridgway was born at Washington, D. C., May 15, 1877, and was in his twenty-fourth year. He was very popular among the young folks of his acquaintance, hundreds of whom have in his death met with a personal bereavement. — C. W. R.

'THE WESTERN ORNITHOLOGIST,' we regret to see, has passed out of existence, its publisher, Mr. Charles C. Tryon, having entered the service of the U. S. Army. It appears, however, to have a worthy successor in 'THE BITTERN, a Bi-monthly Magazine devoted exclusively to Ornithology and Oölogy,' edited and published by Mr. Glen M. Hathorn, of Cedar Rapids, Iowa, with Mr. Carl Fritz Henning of Boone, Iowa, as associate editor. Mr. Henning was formerly associate editor of 'The Western Ornithologist,' and will have charge of the review department of 'The Bittern.' The first number, dated January, 1901, gives promise of a successful career, being typographically pleasing and well-filled with creditable matter, including a number of excellent half-tone illustrations. We wish our new contemporary the success it so well deserves.

'AMERICAN ORNITHOLOGY' is the title of a new monthly illustrated magazine, "for the home and school," published by Charles K. Reed, 75 Thomas St., Worcester, Mass., and edited by C. Albert Reed. A feature of the magazine is the publication of "the life history of four or five birds" in each number, with illustrations of the birds and their eggs. The magazine is well printed and the illustrations are excellent.

'THE PETREL, an illustrated monthly magazine devoted to Ornithology and Oölogy,' comes to us from Palestine, Oregon, the first number bearing date January, 1901. It is edited by John William Martin, and presents a very attractive appearance. It contains a number of interesting articles by well-known writers and several full-page half-tone illustrations of nests and eggs, including those of the American Eared Grebe, the Western Grebe, and the American Coot. We extend to each of these new comers a cordial welcome and our best wishes.

THE WORK of the Biological Survey, U. S. Department of Agriculture, is of special interest to biologists as well as to the agriculturist. From the Annual Report of the Acting-Chief of the Survey, Dr. T. S. Palmer, for the year ending June, 1900, we gather the following: Field work was carried on in southern Texas, particularly along the Gulf coast from Corpus Christi to Brownsville and west to Laredo along the lower Rio Grande, by Mr. Vernon Bailey and Mr. H. C. Oberholser. The work of outlining the life zones in California was continued in the Coast Range, and carried southward to San Francisco Bay, under the personal direction of Dr. Merriam, Chief of the Biological Survey, and work was also continued on the west slope of the Sierra Nevada, from Sierra Valley to the Yosemite. Work was continued in Alaska, chiefly near the coast, by Mr. W. H. Osgood, and Mr. E. A. Preble was sent on what proved to

be a very successful expedition to the region about the southern end of Hudson Bay.

Investigation of the economic relations of birds was continued as usual, both in the field and in the laboratory, the contents of some 2000 bird stomachs having been examined; special field investigations were also continued, by Dr. S. D. Judd and Prof. F. E. L. Beal. The enforcement of the Lacey Act, specially consigned to the Department of Agriculture, added greatly to the work and responsibilities of the Biological Survey, and the prompt and thorough measures taken by the Acting-Chief, Dr. Palmer, are already a matter of record in this journal.

The publications of the Survey, both economic and technical, have been carried on with vigor, and include several numbers of the 'Farmers' Bulletins,' and four numbers of the 'North American Fauna.' There were also reprints of several 'Bulletins,' including three reprints of the Farmers' Bulletin No. 54, on 'Common Birds in their relation to Agriculture,' aggregating 70,000, and making a total issue of more than 200,000 copies of this important document. In addition to all this was of course the laborious routine work, including the distribution of schedules and the writing of some 2000 letters.

THE DELAWARE VALLEY ORNITHOLOGICAL CLUB held its annual meeting at the Academy of Natural Sciences, Philadelphia, January 3, 1901. Dr. Spencer Trotter spoke on 'Birds observed in Nova Scotia' and Mr. Samuel N. Rhoads on 'The Economic Value of Hawks and Owls.' Mr. Wm. L. Baily exhibited a number of lantern slides of birds and nests photographed from nature.

The officers elected for the ensuing year are: President, Charles J. Pennock; Vice-President, William A. Shryock; Secretary, Henry W. Fowler; Treasurer, Stewardson Brown. The average attendance for the past year was twenty, and among the more interesting communications may be mentioned the following: 'Winter Bird Life at Cape Charles, Va.,' by Geo. Spencer Morris; 'Notes on the Birds of Palm Beach, Fla.,' by Dr. W. E. Hughes; 'The Earliest Describers of our Birds,' by Witmer Stone; 'Resemblances in Bird Songs,' by Samuel N. Rhoads; 'Shore-birds observed at Stone Harbor, N. J.,' by D. N. McCadden and Dr. J. F. Prendergast; 'Crossbills in New Jersey,' by Wm. B. Evans; 'A Season's Observations of the New Jersey Gull Colonies,' by Wm. L. Baily; 'Breeding of the Hermit Thrush on Martha's Vineyard,' by H. W. Coggins; 'Recent Capture of Ivory-billed Woodpeckers in Florida,' by C. J. Pennock. The club has recently elected as an Honorary Member, Dr. Samuel W. Woodhouse.

PROFESSOR ALFRED NEWTON, F. R. S., has recently been awarded by the Royal Society one of the Royal medals in recognition of his eminent services to ornithology. In presenting the medal the President,

Lord Lester, paid to the recipient the following high tribute: "Professor Newton has devoted himself for the last fifty years to the study of ornithology; and the 'Dictionary of Birds' may well be called the résumé of his labors. Professor Newton's work is eminently critical — a model of careful and cautious criticism of everything pertaining to his favorite branch of science. The 'Dictionary of Birds' is the acknowledged standard work on ornithology, the progress of which science in this country is due mainly to his critical, suggestive, and stimulating influence. His personal labors refer chiefly to historical, systematic, and faunistic questions It is by his untiring efforts that the vexed question of nomenclature and synonymy has been practically settled and has been put on its present footing. He is also one of the leading authorities in the modern branch of zoögeography, which owes some of the most important modifications and generalizations to him. Lastly, it is only fair to mention that he is one of the few zoölogists among his contemporaries who, from the first, embraced the doctrine of evolution according to Darwinian principles."

The Fifth Annual meeting of the Audubon Society of New York State was held in the large lecture hall of the American Museum of Natural History on March 8, 1901. The President, Morris K. Jesup, presided. The exercises included the annual election, Mr. Jesup being reëlected to the office of President, and Miss E. H. Lockwood to that of Secretary-Treasurer, and addresses by Hon. Charles R. Skinner, Dr. T. S. Palmer, William Dutcher, and Frank M. Chapman. Mr. Skinner spoke of the 'Educational Value of Bird Study' which, with the study of the more common forms of animal and plant-life about us, he characterized as of greater importance than the study, in a foreign tongue, of events which transpired 2000 years ago. He emphasized especially the elevating, purifying influence of contact with nature and heartily endorsed all educational work which would tend to give us a practical knowledge of creatures with which we daily come in contact. Dr. Palmer spoke of the necessity for laws designed to protect non-game as well as game birds, and explained in detail the relation of the Federal to State Laws; the most important provision of the Federal law making an animal subject to the laws of whatever State or Territory it chances to be in.

Mr. Chapman reviewed the work of the Audubon Societies and commented on the remarkable results they had accomplished with only limited means. Mr. Dutcher exhibited a series of slides, made by himself on the Maine coast during July, 1900, and showing certain of the larger colonies of Herring Gulls which had been protected from the demands of feather hunters by wardens whose services Mr. Dutcher had secured by means of the Thayer Fund.

The A. O. U. Committee on Bird Protection stands ready to investigate any illegal killing of birds duly reported to any member of the Committee. For a list of the members for the present year see 'The Auk' for Jan.. 1901, pp. 103, 104.